THE PHI DELTA KAPPAN

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Education raises persons above their surroundings and makes them masters of themselves, rather than merely being creatures of circumstance. It is not enough merely to know how to get a living; it is necessary to know how to live.

Calvin Coolidge.

RESEARCH
SERVICE
LEADERSHIP

The Census and the Teaching Profession

The PHI DELTA KAPPAN

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CONTINUING THE NATIONAL NEWS LETTER OF PHI DELTA KAPPA

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The Census and the Teaching Profession

RALPH DORNFELD OWEN

THIS is census year, the fifteenth decennial roll call. In October, the daily papers carried an item like this: "The Master Barbers' Association of the United States has petitioned the Bureau of Census to classify barbers under the heading of Professions instead of Domestic and Personal Service as heretofore. The Association stated that since barbers need to have a knowledge of bacteriology, they properly belong to the learned professions. The request was refused."

A year ago, one day, the writer was passing a shop window in which plumbing fixtures were displayed. Ordinarily he would not have stopped. But his attention was arrested by a two-tone poster. On a pedestal there stood the figure of a man, muscular and handsome, dressed in blue overalls and a yellow shirt. In his hand he held high a plumber's wrench. Around the pedestal and gazing up at him in awe there were hundreds, perhaps thousands of ordinary men and women of all ages and walks of life. Above his head was an inscription: "The health of the public is safe in the hands of the plumber."

He pondered the meaning of the poster. And then he recalled that not long since he had read an article in the Literary Digest entitled "A Profession of Plumbing," which ran something like this:

The establishment of the Theodore Ahrens Professorship in Plumbing, Heating, and Ventilating, at the Carnegie Institute of Technology, Pittsburgh, is attracting no little attention from a daily press. Clifford B. Connelly, the Institute's Director of Industrial Relations, says: "I need not tell you that plumbing, heating, and ventilating have come to be among the most vital factors in American life. Whereas these factors have developed somewhat according to rule of thumb and without the application of scientific methods and principles, this professorship means the application of the hitherto neglected science. It will tend to put the plumbing, heating, and ventilating industries on a higher plane and further increase their usefulness to the American public."

Occupational Levels and Social Standing. What do these instances mean? Let us take a look over the whole field of wage-earners in the United States—according to the 1920 census—33,000,000 men and 9,000,000 women.

They fall into five levels: at the bottom are 10,000,000 unskilled laborers. Next above them there are 10,000,000 semi-skilled laborers; on the third level there are 15,000,000 skilled artisans and tradesmen; on the fourth level there is a group, rather difficult to define or enumerate, which we may call the semi-professional and business group of about 3,000,000 people; and on the fifth level is a small group of people whom we include in the term professional, only 2,000,000.

Now the plumber, asking that a professorship of plumbing be established, stresses the importance of the service he renders and the accumulation of scientific knowledge. He desires to rise from the level of a skilled trade to that of a profession.

Likewise, the barbers knowing that society appreciates most highly those occupational groups that require the highest intelligence and training, desire to enjoy the increased prestige and remuneration consequent upon their rising from the classification of Personal Service to that of Profession.

The Bureau of Census recognizes over a hundred professions including about twenty varieties of engineers, fifteen of draftsmen, ten of surveyors. Of course, it includes the four traditional callings of the law, ministry, medicine and teaching.

What differentiates a member of the professions from a business man or a clerical worker? The Bureau would probably answer that it is a degree of skill which the possessor has acquired through a period of specialized training in an institution of learning above the high school. Even accepting this defini-

tion, it is difficult to understand why the Bureau includes under the Professions such callings as that of the practical nurse, the masseur, the showman or the sign painter.

The fact is that the Bureau has made a serious error in not providing for a semi-professional group, one which requires a high degree of skill, but less than a college education.

Characteristics of a Profession. What are the characteristics of a profession? They are well established by centuries of custom—especially in the four old professions, the ministry, law, medicine, and university-teaching—as these have developed in Europe. A profession has five characteristics:

1. The ideal of service to humanity rather than that of personal profit.
2. Specialized knowledge and skill preserved in technical language.
3. Protracted period of preparation.
4. Life membership.
5. Effective organization.

1. Ideal Service to Humanity Rather than Personal Gain. A profession distinguishes itself from a business in this respect; business places dividends first; the profession does not. The great scientists who have made modern life possible with its tremendous increase in comforts and wealth were men who never asked for pay; they were satisfied to discover and know. A physician, once he assumes a case, puts in his best effort, regardless of the size of the fee. Dr. Howard Atwood Kelly, the famous professor of surgery at Johns Hopkins writes: "Hospital experience drew me into intimate touch with the problems of suffering humanity and revealed the priceless gratitude of the poor, when treated with affectionate consideration; this was the final touch necessary to convert all my interest to my profession, no longer a means of livelihood, but a shining path of service replete with spiritual rewards. I owe to the poor and to the mill-workers of Kensington, and to all others since who have trusted me so unreservedly through life, the rich rewards of joy and satisfaction which the practice of surgery has brought to me these past forty-three years."

The first characteristic strictly applied excludes business men from the professions. Likewise it reduces the Bureau's list by some ninety per-cent.

In business the laws of supply and demand, diminishing returns, profit and loss are operative. Not so in the social service callings and professions. Here human happiness is placed above economic production.

A few years ago, in a little town in Kentucky a young man named Floyd Collins, crawling about in a cave, was caught between two rocks. The town spent $50,000 in trying to save his life. It was contrary to all principles of business. The law of diminishing returns would have demanded that they cease their efforts after ten or twelve hours. The law of profit and loss would have counseled them that they would never get their money back. It was not a business undertaking, it was a human welfare project. A little later in another Kentucky town twenty-four miners were entombed for five days. The mining company temporarily ceased to operate for gain and transformed its activities into a social service enterprise.

2. A Growing Body of Specialized Knowledge Expressed in Technical Language. There can be no doubt that the profession of law has such knowledge. The ministry has it. Medicine has always had it. Witness the Latin prescription which you take from the physician to the pharmacist. But medicine has seen a tremendous growth in the last fifty years. About 1875 the study of bacteriology began; through its application to medical practice we have gained preventive medicines, serums, toxin-antitoxin treatments. Through its application to surgery we have the modern methods of preventing infection. This with the introduction of anesthetics about 1850 has led to a great development of surgery. The discovery of the X-ray and similar rays has led to a special field of work. Fifty years ago the physician and the druggist both depended upon materia medica for their specialized knowledge; the druggist still depends upon it; while the physician has added all these new fields, anesthetics, serums, sterilization, surgery, X-ray. No wonder that the physician has gained professionally, while the pharmacist has lost ground.

By what methods has medicine accom-

plished all this? By (1) controlled experimentation in the laboratory, using quantitative measures; (2) careful recording of every patient's case—the method of the case study.

But you ask: What technical knowledge can the teacher have which he does not acquire through experience? Education has undergone a change parallel to that of medicine. Previous to 1875, physicians gathered much useful knowledge from personal observations and inferences, while teachers developed a valuable body of knowledge through thoughtful observation of children, knowledge which they organized with the help of philosophy and logic. Neither was an exact science. Since then, through the careful accumulation of observations, through the laboratory study of individual differences by means of experimental psychology, through the study of the learning process by means of objective experiments, through the application of quantitative measures to achievements once thought incapable of such measurement, through the development of mental tests, education has built up a very considerable technical knowledge. What is even better—its members are developing the scientific attitude.

Like medicine, it never can become only a science, it will always have to remain, not a crude art but a fine art enlightened by technical knowledge.

There are two kinds of technical knowledge available for the teacher: The secondary-school teacher has his choice between placing his subject-matter first and placing the psychological studies first. If he chooses subject matter, he must carry his study through one or more years of graduate work, selecting a narrow field in which to carry on research or intensive study.

For the elementary-school teacher the most natural field is the study of the child in his physical, intellectual, and emotional development. Those who object that there is not sufficient subject matter in this field should remember that if the health of the child is first and most important of the six social aims of education, then it is important that the teacher be scientifically trained in the care of the child's health. A four year professional course combining the present two-year normal course with two years of training in child-health and psychology is the thing of the near future.

3. Protracted Period of Preparation. This naturally follows from the second. Time was in America when, due to our pioneer conditions, talented men were permitted to go into medicine or law or the ministry through a course of apprenticeship. The writer recalls the family doctor in his home town—Dr. William Whyte. About the year 1875, young Whyte entered the services of a general practitioner, Dr. Williams. He took care of the horses, drove the doctor on calls, helped prepare medicine and make tests, and he read medicine. In due time, his employer certified him to the State Board of Medical Examiners, he passed the examination, and was licensed to practise. He soon bought out his master's practice and settled down to a long, arduous, honorable career. But pioneer times have passed. The European ideal of demanding a college education as a prerequisite for professional study was never quite lost sight of. The greater efficiency of European professional training was obvious. The larger the body of technical knowledge, the greater must be the general preparation and the longer must be the professional preparation. Since Dr. Whyte began his studies, the medical profession has gained the technical knowledge discussed above. Today the course in medicine requires two years of college as a prerequisite to entrance in the medical school, and a year of practice in a hospital after the young practitioner has graduated. That means seven years of study above the high school without much opportunity for earning money on the side.

Now when we look at teaching and try to apply this criterion we are embarrassed. There are the two-year graduates of a normal school. In what does their specialized knowledge consist? In the content of history or geography or literature or arithmetic? No, for other people in other lines who have finished high school have had the same instruction in subject matter. It must consist in a meager knowledge of psychology, child nature, the learning process, methods of teaching. As to skill, we cannot compare their skill to that of the skilled artisan or technician. The two-year normal graduates might

best be placed on the semi-professional level, along with nurses.

The four-year college graduate feels confident that he has the knowledge which warrants his stepping into a profession. He has majored, let us say, in chemistry, taken thirty semester hours of college work in the subject. That is worth something. But where would it place him if he were to go directly into a laboratory in a university or hospital or industrial research bureau? He would find himself only an apprentice, one who had a great deal more to learn. The fact is that there are thousands of college graduates, not teaching, who have studied the same subjects in college, taken the same majors as the young men and women who go out into teaching. It is manifest, then, that the young teacher's knowledge of subject-matter cannot be classified as technical. The college graduate who goes into a school to teach without a minimum of professional knowledge and training has no right to be classed as a member of a profession. He is only a semi-skilled worker, no matter how well educated he be. When we discover that the high-school teachers of this country average only four-tenths of a year of preparation above their college degree, we begin to realize how poorly prepared they are.

Turning to colleges and professional schools, we find that they employ about 40,000 teachers. The minimum requirement set up by the Carnegie Foundation for the Advancement of Teaching is the possession of a regularly earned master's degree. About two-thirds of these teachers do have it; the other third have doctor's degrees, representing a minimum of three or more years' graduate work above the college level. The group of college teachers who have the equivalent of the doctor of philosophy degree includes some of the greatest creative scientists and educational statesmen in the world. Here at last teaching is on a strictly professional level.

4. Life-membership. This, too, follows from the preceding ones. A body of technical knowledge requires years of preparation. Years of preparation make for professional standing and no one will lightly throw it away. Again, let us refer to the family physician, Dr. Whyte. Does anyone suppose that he quit his profession after ten years and went into selling insurance? No, he remained in the practice of medicine for forty years in one and the same town. The average age of the 165,000 physicians, of the 125,000 lawyers, of the 125,000 ministers, of the 135,000 engineers, of the 40,000 college and university professors in this country is about the same, somewhere above 40. But what is it for secondary-school teachers? Somewhere below 30!

In railway mail-cars the mail-clerks have to sort letters according to their destination. Whenever they find one that is insufficiently addressed or about whose destination there is some doubt, they throw it into an "Unclassified Box" for deferred decision. Teaching in secondary schools is the "Unclassified Box" for college graduates. Whoever wants to defer his or her decision as to a life-work goes into it because there are almost no prerequisites. The result is that, as a group, secondary-school teachers are immature; their tenure is brief; from 25% to 33% change their positions every year. Has anyone ever heard of one-third of the physicians of a state changing places in one year. If Dr. Whyte had remained in his first location only three years, can one imagine that he would have acquired much influence in his community?

Edward Cary Hayes, Professor of Sociology in the University of Illinois, writes:

> "Another reason why teachers have not more usually afforded the necessary social leadership in America is that they themselves have not been ripe representatives of modern civilization and culture, and this is because we have not in our country a sufficient number of thoroughly educated men, the products of cultured homes and of liberal schooling, to fill the positions for which thorough training should be an essential qualification. (For this reason the standards of educational requirements for school teachers, which are enforced in some parts of the old world, are as yet impracticable here.) The American school system is exceedingly admirable as an organization. . . . But the supreme element in the success of a school system is still largely lacking, namely, adequate qualifications of the teachers themselves."

5. Organization. Let us use the American Medical Association as a model. The county medical society is the unit of organization. Every county in every state of the Union has one. Thus the Philadelphia County Medical Society was founded in 1849 and incor-

porated under the laws of Pennsylvania in 1877. Membership in a county medical society is limited to graduates of institutions legally authorized to confer the degree of doctor of medicine, who have legally qualified to practise in the state by taking the state examination, and who are citizens of the United States. Members may be received by transfer from other county societies.

Every state and territory in the Union has its state medical society. That of Pennsylvania was organized in 1848 and incorporated in 1890. Its purpose, as expressed in its constitution, is "to federate and bring into one compact organization the entire medical profession of the state; to unite with similar state societies to form the American Medical Association, to extend medical knowledge and advance medical science; to elevate the standard of medical education; to secure the enactment and enforcement of just medical laws; to promote friendly intercourse among physicians; to guard and foster the material interests of its members and to protect them against imposition; to enlighten and direct publication in regard to the great problems of public health, so that the profession shall become more useful to the public in the prevention and management of disease and in prolonging and adding to the comfort of life."

Note well! Membership in the state society is open only to physicians who are in good standing in their county societies. The legislative power of the state society is vested in a house of delegates, composed of one delegate from each county society for every 100 members, of the presidents of the county societies, the president of the state society, and the trustees of the state society out of the dues of its members. One dollar per member is set aside annually for a legal defense fund to be used for the legitimate expenses of members threatened with or prosecuted for alleged malpractice. State teachers' associations might well copy this feature.

American Medical Association. The American Medical Association was organized in 1847 and reorganized and incorporated by act of Congress in 1901. It has national headquarters at Chicago. Its aims are the same as those previously stated for the state society of Pennsylvania.

Membership is limited to such members of the state and county societies as are in good standing and apply for membership or fellowship. A fellowship costs $5.00 a year, entitles one to the official medical journal, and makes the holder eligible to hold office, serve as a member of the National House of Delegates, and participate in the work of the scientific sections of the association. In June, 1926, there were about 100,000 members enrolled in the association, and 60,000 of them were listed on the fellowship roster. According to the census figures, this would mean that two-thirds of the physicians in this country belong to their national association.

Legislative power is vested in a House of Delegates, consisting of one representative for every 500 members of each state society. Its officers are elected annually by the House of Delegates. The president is not eligible for re-election.

Funds are raised by an assessment of not more than $10.00 per member and collected through the state and county organizations. Voluntary gifts for such purposes as research are received. For scientific study and research, the association is divided into fifteen sections. Business affairs are managed by a board of trustees through standing committees or councils:

The Judicial Council
Council on Medical Legislation
Council on Health and Public Instruction
Council on Medical Education and Hospitals founded in 1904
Council on Pharmacy and Chemistry.

In 1912, the American Association adopted its Principles of Medical Ethics. They fall into three groups: (1) duties of the physician to his patient; (2) duties of the physician to other physicians and the profession; (3) duties of physicians to the public.

Discipline. A conspicuous feature of the medical organization is its machinery for enforcing discipline. Note its prohibition of commercialism.

"Any physician who shall procure a patent for a remedy or for an instrument of surgery, or who sells or is interested in the sale of patented remedies or nostrums, or shall give a certificate in favor of a patented or proprietary remedy or a patented in-

strument, or who shall enter into agreement to receive pecuniary compensation or patronage for sending prescriptions to an apothecary, shall be disqualified from being a member of the County Medical Society; or, if already a member, upon conviction of such offence shall ipso facto be deprived of membership."

In case a physician feels that he has been unfairly treated by a colleague, he can present the evidence to the board of censors of his district. The board will meet as a court, swear, and hear witnesses and arguments; and render its decision. This may be appealed by the losing party to the state society's judicial council. The body employs a legal advisor. Its decision is final. It can suspend a member or fine him. It can recommend to the State Board of Medical Examiners that a member's license be revoked.

This is illustrated by the case of a Doctor S., a physician, who was guilty of unethical professional practices and was excluded from the Wisconsin Medical Society. Other physicians would not fraternize with him or relieve him while he was off on vacation. He had to turn to a form of mechanical therapeutic practice in order to make a living. He never regained his standing in the profession.

The legal profession through judicial committees of its state associations exercises similar discipline. The writer recalls the case of Attorney M., who settled in a suburb of Chicago to practise law. He became involved in shady transactions in connection with an estate that he was handling. The Illinois State Bar Association investigated and recommended to the Supreme Court of the state that Mr. M. be disbarred. The case was pending for about a year. In the meantime, knowing that he deserved the punishment, he fled from the state and moved into Wisconsin. He applied for admission to the bar. The Supreme Court of Wisconsin granted it. But when a year later he was actually disbarred in Illinois, the Wisconsin Bar Association took cognizance of it, and secured similar action from the Wisconsin Supreme Court.

Improvement of Standards. The story of how the medical profession of the United States has professionalized itself during the last twenty years should arouse teachers to resolve to do as well. In 1901, the American Medical Association was reorganized. In 1904, it established the Council on Medical Education and Hospitals. In 1909-10, in cooperation with the Carnegie Foundation for the advancement of teaching, it made a survey of all existing schools and published a report in 1910. It showed that there were about 160 schools enrolling about 30,000 students. It found great inequalities in equipment and in instruction, and in the preparation of the teachers. The council, in cooperation with the Carnegie Foundation, classified the schools into four groups: A, B, C, D. It recommended that the weakest schools be closed and that wherever there were two schools in the same city, they may be combined. As a result there was much dismay in many quarters, much earnest collecting of endowment funds, much scrutinizing of faculties. When the survey recommendations had been carried out, there were only half as many schools. In the year 1925 there were about 80.

Prior to 1900, less than one-fourth of the medical schools required even a high-school education for entrance. In 1905, a young man who had attended high school with the writer entered a medical school in Chicago, although he had dropped out of high school at the end of his sophomore year. His having passed the state pharmacist's examination was accepted as the equivalent. By 1910, about 100 schools had announced high-school graduation as the minimum entrance requirement. In 1914, the Carnegie Foundation and the Council on Medical Education set up the requirement of one year of college for admission to all class A institutions. In 1918, it set up two years of college as the minimum for admission to all class A schools.

In 1904, there was an oversupply of schools and likewise an oversupply of students. Naturally, many of the students came with poor ability and poor preparation. The raising of standards effected great improvement in the quality of students. The total number of graduates decreased from 5,700 in 1904, to 3,200 in 1921. But this decrease is more than compensated for by the improvement in quality. In 1904, only 370 students graduated from class A institutions; while in 1921 there were 3,100—an increase of 1,000% in quality.

Limiting the number of students and select-

ing them more highly is not a piece of professional selfishness. The old didactic lecture and the large clinic have given way to individual instruction in the laboratory. The new Medical School at the University of Rochester has no lecture rooms at all; the whole equipment, costing three million dollars, will be devoted to the training of only 100 students, so that it will graduate about 25 each year. The increased amount of technical knowledge which the student has to master makes this necessary. Thus the efficiency of medical teaching is greatly increased and also the cost. In 1920-21 the student's fees in class A medical schools amounted to only 30% of the running expenses of the school. No school can afford to take a student who is a poor risk.

The state board of medical examiners in most states consists of a group of physicians appointed by the governor. In some states, such as Iowa, they are nominated by the state medical association. These men pass upon the fitness of every candidate even after he has his diploma. Let us apply this provision to the teaching profession. We should demand that every candidate after getting his diploma, or better, his master's degree, must appear in person before a state examining committee and pass both an oral and a written examination. The state teachers' association should have the right to nominate annually one member of the state board of examiners, to serve for a term of five or six years.

Application to Teachers—

1. If the U. S. Census Bureau were to classify practical nurses, registered nurses, hospital orderlies, chiropodists, pharmacists, and dentists under the term "doctor of medicine," the American Medical Association would make an effective protest. Nor should we tolerate putting all degrees of teachers under one term. The National Education Association should emphatically protest against it. Just as the competition of Oriental laborers on the Pacific Coast lowers the wages and the social status of American laborers, so the inclusion of untrained and half-trained people under the designation "teaching profession" lowers the social status of the entire group.

Membership in the national and state educational associations should be limited to persons who have completed a minimum of professional training above the high school and have had two years of successful teaching experience.

2. The doctor's degree as evidence of professional preparation should be protected.

Some thousands of men of superior ability have spent time and money to prepare themselves for teaching on the higher levels by earning a doctor's degree. Many more are now doing so. In the future there will probably be two degrees, the doctor of philosophy for the man who prefers research, and the doctor of education for the man who prefers teaching. In each case the man is spending time and money. He is entitled to protection.

The National Education Association should discourage the indiscriminate giving of honorary degrees by small colleges. It should condemn the use of an honorary degree among professional educators as a substitute for the earned degree. Far from discouraging the use of the title "doctor" as undemocratic, it should encourage its discriminating use.

Does any one believe that the medical profession would voluntarily discourage the public from using the title "doctor" in reference to a physician? It would injure the prestige of the profession. Quite so in the teaching profession the title, if limited to those who have earned it, will promote professional prestige.

3. Membership in the national and state education associations should be based upon being in good standing in the local or county education association. Only from participation in an active local association will the teacher acquire real professional interest and spirit.

Finally, if teaching is to be a profession, membership in its professional organizations must be limited to those who bear the marks of the profession.

What Shall I Study?

SHELTON PHELPS

HE HAD just finished his first job of teaching. During the past eight months he had taught the various elementary school subjects to forty boys and girls. He had all of them in one room all day and those students not reciting were listening to others recite, were studying, or just were being watched. People of his age and type seldom admit they are planning to teach, and perhaps more seldom admit that they like teaching. Strangely though, he had no thought of quitting, and was even now looking forward to next year somewhere. Some of the teaching had been easy, even pleasant. The arithmetic he had enjoyed, and reading both the history and the literature the evening before teaching it had been a pleasant review. The things he didn't know about he didn't bother about, and while there were no competitive contests in establishing health habits and while "current events" were incidental, all concerned seemed rather happy over the school. He could come back for another year of teaching, but even within the conservative precincts of teaching the call of adventure was upon him and he decided to wander in an educational universe. Some one had told him to go to a school for teachers during the summer and he would be sent out to a school somewhere next winter to teach. This plan had enough of chance and change to satisfy the immediate cravings of his nature and always in the background was the hope that the distance he would be sent might be great and the adventure real.

Having no more definite plans than those described he took himself to the teachers school of which he had been told the winter before. Among the things which he had been told was that this school being planned especially for teachers he could enter and begin work at any time. He had also been told that instead of following certain courses which were planned for beginners and continuing for the whole year in these, he could pick almost any subject he wanted to study provided only he pick courses in which he could successfully do the classwork. His friend had also told him that instead of studying courses which told of the past and of the far away, the courses he would study would always bear on his own task of teaching, and with things of the practical present. This had disturbed him a little, for he liked to read stories of the long ago, and to sense the culture of other countries. The languages of other lands and the things farthest away had ever a fascination for him. Not that he consciously wanted to be trained away, but that he wanted to know of the things which were somewhere away from himself and his surroundings.

This school to which his friend had sent him happened to be one of the very well known schools for teachers. It also happened, and by planning rather than chance, that he arrived on the opening day of the quarter term. The season was summer and a throng of teachers had arrived on purposes many of them similar to his own. The task before them on which all were assiduously bent, was that of picking out courses, registering for them and getting down to work. The process seemed simple enough to all but to a beginner. Scattered about at tables were all the different faculty members each under a placard bearing the name of the faculty member and the subject he taught. To the beginner this arrangement seemed to answer the question which had troubled him since arrival, *what shall I study?* In at least two regards it seemed like the beautiful cafeteria in which he had eaten his breakfast. Before him was a display of tempting morsels each speaking for itself and each offering the answer to the question, which shall I choose. The very multiplicity of good things, however, defeated in part the purpose they set out to accomplish by making it difficult to select among so many desirables. There was another difficulty, presented in the cafeteria at least, if a viand was to reappear on the display counter tomorrow it must be chosen today; each article of food therefore spoke for itself and not for the merits of its neighbor.

The first actual choice came between a gen-

eral and a special course. One dealt with principles and laws, leaving the applications for the learner, the other dealt with applications leaving the principles and laws to be later worked out. The latter won. The reasons for choice, though they perhaps have operated informally, were: "more speed," "practical," "specific need," and "immediately useful." It is too much to expect the beginning student to anticipate the ephemeral character of some of these special courses, and on display the shortcomings of individual courses are not often played up. A second choice was made on the basis of the relative interests in two subjects. The one chosen was believed to be the one liked better and the subject in which the more interest was felt. A third choice would have been made in a similar manner but this choice involved an instructor against whose courses he had already been that day twice warned, so the choice was made on the basis of the instructor rather than on the interest felt in the course. The fourth choice was controlled by the hour available and desirable for recitation and by the other claims of the general schedule. The hours the student cared to recite and the courses available during those hours determining in a large part what course would be the fourth choice.

The summer passed, a new position was secured and another year of teaching was done successfully in a situation somewhat better than the position held the previous year so far as both salary and professional standing were concerned. Ambition to do more advanced teaching, to be a high school teacher or perhaps even in the future, a college teacher, was beginning to form in the plans of the young man. To realize these ambitions would require more study. This time a new friend, a high school teacher, pointed out the advantages of college and university study, and it was decided to substitute study in such a school for that which a teachers college offered. There were several reasons for choosing a rather large college, locally called a university, supported by the church to which the young man belonged, as the place to attend school. In the first place it was the university close by and it enjoyed a good reputation with most of its graduates securing positions teaching in high schools. The local minister spoke in the highest terms of the "Christian atmosphere" of the college-university in contrast to certain godless schools, off-springs of the Jeffersonian parent which charged no tuition, and the control of which was wholly in the hands of laymen. Correspondence revealed that part of the tuition could be paid at an indefinite date after graduation; that the summer, when unlike the teachers college there was no school, offered opportunities to ambitious young men to make enough money to carry them through the winter; and that scholarships were available from certain devoted patrons which would insure the possibility of four years' stay instead of a few intermittent quarters. The final factor perhaps was a marvelous allegiance, a fraternal brotherhood among the students, the alumni, and the institution. This school spirit, his friend told him, the faculty not only knew about but encouraged. If it existed in the teachers college where he had "summered," it was obscured almost entirely by the hurry and earnestness of work. To the college-university he went.

Arriving, the question *What shall I study* had already been answered. Freshmen took certain courses, even the section in which they would recite being decided for them. There arose no question as to choice of course for that choice had been made for him. The popularity of the instructor, the interest in the subject, and the convenience of the hour were in the language of the scientist "controlled factors" in the making of this choice. The beginner, as he grew older in the college, came to believe that one individual, *the dean*, not the faculty, made for students the choice of subjects. It was too much to expect a student to know that to be a successful dean a faculty must be "efficiently administered." He could not be expected to know that this very happy phase meant that the dean must consider faculty as well as student needs, even sometimes consider them before he considered student needs. Courses must be offered that the faculty members could and would teach, the hours must be such that instructors are not too greatly inconvenienced. Deans, on the whole, would be popular with faculties; and *Administrative Opportunism* often

explains a multitude of choices, which they have made. Deans must be popular with students too and election is replacing prescription in many schools depending for an appreciable part of their incomes on student fees. As a result of conflicts between these two views deans grow gray trying to reconcile the two theories in one practice. Registration completed, the young student retained the courses, which he had chosen nominally for the semester actually for the year. The next year, as in part a concession to election, he was allowed to take other subjects and within certain limits a continuation of this practice described his four years of work leading to the baccalaureate degree. Then he was *ready* to seek the coveted high school teaching position.

In his state there had been in the meantime slowly evolving state control of education and the divisions of certification and of secondary education in the State Department of Education had begun to ask of would-be high school teachers, *What have you studied?* There had been developed the belief in the state that a high school teacher should have studied, for not less than two full years in college and preferably for three years, the subject to be taught in high school. In addition to this academic study the high school teacher is expected to have studied professional courses in amount, the equivalent of the time devoted to the study of the subject to be taught. An examination of his transcript revealed to this student who had gone to so much trouble to prepare himself, that he hadn't as much as eighteen semester hours in but each of two subjects and these subjects were separated so widely in combination value that he was told frankly that he stood no chance of getting a position teaching them. He was further told that with only eighteen college hours in a subject he could not expect to qualify as a single subject teacher in one of the larger high schools. He had nine semester hours of work in general psychology and a following semester in ethics, both of which as "administrative expediency" might be "counted" professional. He could not be expected to know, nor would it comfort him to know, that in a recent study of a state's high school teaching force most of the graduates of a widely known school who were then teaching in that state (which state hadn't the specific subject requirement), were in the same situation, in this regard, as he.

What could he do? He asked the state supervisor of high schools and was advised to return to the teachers college where he formerly had spent a summer. He sought a scholarship and found the available list exhausted. He borrowed the money and presented himself at the teachers college seeking admission to the graduate school. *What should he study?* He decided that he would secure his "professional preparation" in the form of the twelve semester hours of required work in education which he must have in order to obtain a certificate. He would still be short on subject matter hours but he had been "unofficially advised" that he could secure a professional certificate in a state where as yet there was no specified number of "hours studied in college in subject taught" required. Did he wish to make education his major subject of study? He thought not, but this summer's work would give him the required eighteen semester hours in education which was just the total load he could carry in one summer. Next summer he would decide *what should be his major subject.* Should he this summer study about education, its subject matter, or should he study the skills of the teaching process as those skills were taught in the laboratory, the training school? Again, in but slightly varied form, the same old question confronted him.

He decided to study the science of education for it seemed to him the more dignified and scholarly procedure. He also felt that faculty advisors and the administration of the time preferred that choice. The summer's work at the teachers college worked as it had worked that first summer, and he went out in a neighboring state and taught successfully in a good high school a subject in which he studied only eighteen semester hours in college. He came back and chose as his major subject of study the one he was teaching and returned to a second year of high school teaching. The following summer he completed his master's degree at the teachers college and secured a position in one of the best high schools in his own state, such a

position as he had very much coveted, when he was graduated from college.

Each succeeding summer he returned to the teachers college electing those courses which met his interests. Sometimes it was a special course in his own subject, which special phase of knowledge had particular appeal. Sometimes it was a course in education which because of its vocational value was selected for study. Then came the desire to become a college teacher and a college friend frankly told him that the *sine qua non* to college teaching was the possession of the Ph.D. degree. He talked to the teachers college authorities and was encouraged to return to study for that degree. He decided to quit his high school teaching position and to secure the advanced degree.

Arrived at the teachers college for this final lap of study he once more was confronted with the question, *What shall I study?* He was told that there were now so many more men than formerly with Ph.D. degrees whose major work had been in education that education was no longer the open sesame to the best college positions. He was in fact advised to make his specialty in study the subject he had been teaching in high school. After much worry, however, he decided to specialize in the philosophy of education with a minor specialization in his beloved mathematics. General courses or special ones, narrow specialization or a more widening generalization, these questions confronted him constantly, and he was learning to recognize in them the same old question which had always bothered him. In the end, though, advanced study worked again, as both other stays at the teachers college had worked and on the completion of the Ph.D. degree he became an instructor in his alma mater. The years slipped by and the gray was coming in his temples. He had achieved the reputation of being one of the capable teachers in the institution. Students sought his courses, and the administration pointed to his work, with some assurance of its success.

Among his fellows he had achieved the reputation of being somewhat scholarly, conservative and thoughtful, and his advice was often sought, where decisions of more than usual moment had to be made. Fair in his dealings, thoughtful of others he moved along without friction, to a more and more prominent position in the teachers college.

After several years of successful teaching he was "professionally promoted" to a deanship. In this last named capacity, watching the flounderings of students and impressed with the lack of thoughtful direction in the affairs of these same students, one day he asked himself, why doesn't someone tell these youngsters what to study. Seeking to shape an answer he faced such phases of his own question as these:

1. Should only the interesting be studied or should interest be sought through study?
2. Should study be confined to the situations confronting one or rather should it be extended to the very remote?
3. Should study be more of the past or of the present?
4. Should results of study meet specific needs or may those results be only remotely useful and still be very much worthwhile?
5. Should studies be in the main special ones or general ones?
6. Should studies be narrowly concentrated or widely distributed?

As he closed his desk, where he had been while musing over the wanderings of students, he realized with a sigh that before he would be ready to answer these questions his need to study them would be gone. At present he could only study about them, literally studying about what these students should study. Perhaps, though, after all, this is better anyway. If all students could be brought to work out each for himself, on the basis of careful consideration, the answer to the question, *What shall I study?* even if by trial and error, mostly error, it would be a greater achievement than for one man to tell all what they should study, even if that man could be found. *Some of the world's greatest questions are perhaps more effective as questions unanswered than their answers would be, so far as the development of human thought is concerned.* Then, too, perhaps, in a Democracy at least, one has an inherent right to determine by this same trial and error what he is best fitted to do, and what types of study he wishes most to pursue, perhaps even including in that privilege the right to fail.

A Peculiar Membership Trend in the Chicago Public Schools

DON C. ROGERS

FOR the past six years the population of Chicago increased at the rate of 72,183 persons a year, but the membership of the elementary schools decreased at the rate of 1,190 pupils a year. Chicago now has 433,096 more people than in 1924, but the public schools have 7,137 fewer pupils in grades 1 to 6.

This is a singular phenomenon which has given rise to much speculation as to its causes. The suggestion has been advanced that the parochial schools may have made inroads into public school membership, but such data as are available reveal a corresponding loss in parochial schools. Chicago newspaper reporters ventured the opinion that "war babies" formerly built up an abnormally large membership which is now returning to normalcy. However, the "war baby crop" would not reach first grade until about 1924, and the big gains in membership came before 1924 (an average increase of 9,068 elementary pupils each year from 1920 to 1924). Now, however, with the alleged big quota of so-called "war babies" in school since 1924, the membership figures have grown smaller. Finally, the only theory which has been able to survive is birth-rate decline. In 1913 there were 24.0 babies born in Chicago per thousand of general population. By 1929 the rate had dwindled to 18.4 per thousand. It is no wonder that there are fewer elementary school children.

Table I shows a 30% decrease in the birth rate in sixteen years. Chicago's birth rate is now below that of France where a static population prevails. However, since Chicago's death rate is only about two-thirds that of France, there is no "race suicide" in immediate prospect.

The second phase of the peculiar Chicago school-membership phenomenon is the fact that the secondary-school membership, junior and senior high school, has shot upward at a dizzy pace even while the elementary-school membership has been dwindling. Grades 7 to 12 increased an average of 9,219 pupils per year from 1924 to 1930, while grades 1 to 6 were decreasing at the rate of 1,190 pupils per year. See table II.

Table I. Chicago Birth Rate

Year	Births per Thousand of Population
1913	24.0
1914	23.6
1915	23.2
1916	22.7
1917	22.3
1918	21.8
1919	21.4
1920	20.9
1921	20.3
1922	20.0
1923	19.4
1924	20.0
1925	19.9
1926	19.7
1927	19.6
1928	18.7
1929	18.4

There are several possible explanations for this increase in holding-power in grades 7 to 12. First, school work is being made more attractive in high school, hence children who formerly dropped out now stay on for higher grades through the lure of interest. Second, in 1924 the Chicago Board of Education advanced the age limit below which a working certificate and part-time attendance at continuation school was required of children who had not finished 8th grade, but who asked to quit and go to work at the age of 16 to 17 years. However, graduation from the 8th grade removed a child from the working-certificate and continuation-school requirements, and in 1928 the Board of Education changed their ruling that a child must be 17 years of age before he becomes eligible to work without a certificate and part-time attendance at continuation school, irrespective of his school achievements. Third, a deliberate belief in the value of secondary

Table II. Population Growth and Changes in Public School Membership in Chicago During the Past Six Years.*

Year	City Population	Grades 1 to 6	Grades 7 to 9	Grades 10 to 12
1924	2,940,656	260,872	88,561	32,209
1930	3,373,753	253,735	118,717	57,365
Total change	433,096	*7,137***	30,156	25,156
Average change per year	72,183	*1,190***	5,026	4,193

*School data are grouped according to the span of grades in the elementary, junior high and senior high schools on the basis of regular day-school membership at the end of September of each year.
**Figures in italics indicate loss.

education has no doubt contributed its share. Fourth, proponents of the junior high school claim considerable credit for the increased holding power of the secondary school. In 1924, Chicago launched a city-wide junior high school program, the 6-3-3 plan. There are now twenty-five junior high schools in operation.

An analysis of the membership trend of each grade shows a rather interesting situation (see Figure 1).

The membership of Grade 1 mounted rapidly from 1920 to 1924 and then broke sharply, until we find in 1930 a smaller first grade

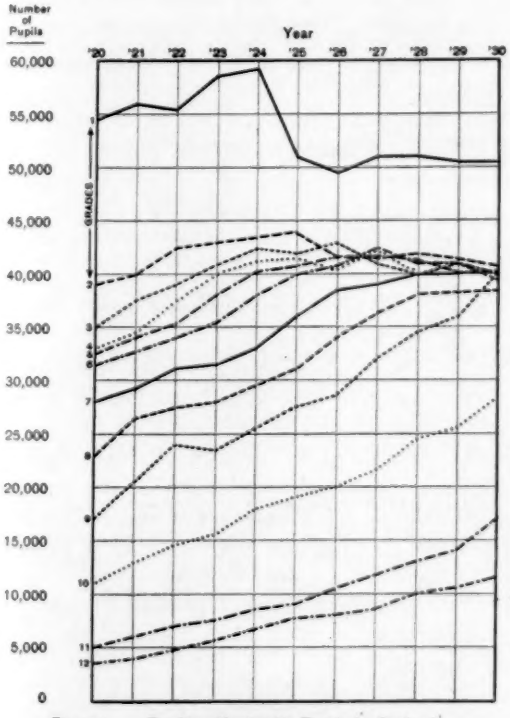

Figure 1 Ten-Year Membership Trends by Grades in the Chicago Public Schools 1920 to 1930

than in 1924. The curve of membership in Grade 2 behaved similarly and likewise in the other elementary grades. But notice (in Figure 1) that each grade seemed to rise to its peak approximately one year later than the preceding grade; for example, Grade 1 in 1924, Grade 2 in 1925, Grade 3 in 1926, and so forth. By 1928 the membership curves of all grades up to and including 7th and 8th grades, had reached their peak and had either declined or at least flattened out. There seems to be a wave moving through the grades, starting in 1924, surging to a crest in each succeeding year, and then dipping downward. The wave reached 7th and 8th grades in 1928, and there was reason to suppose that it would reach 9th grade in 1929. In 1929 the membership curve of the 7th and 8th grades flattened out completely, and the 9th grade membership curve flattened slightly—all the more evidence that the 9th grade must surely drop off the next year. Strangely enough, in 1930 the 9th grade membership, instead of dropping off, increased by the greatest amount in the history of the Chicago public schools. This fact left the statisticians and child-accounting experts groggy. It is still unaccounted for fully. The explanation commonly given is as follows:

The parochial school membership in Chicago is about one-third as large as the public school membership. The parochial high schools charge tuition. Chicago, like the rest of the country, is now suffering from business depression and large numbers of persons are unemployed. Perhaps children who otherwise would have gone to parochial high schools or private high schools on the tuition basis have been compelled by economic circumstances to enroll in the free public high schools. Reliable data on this point are not

yet obtainable, although several public high school principals have reported a noticeable increase in enrollment and transfer from parochial schools. Even if this theory is correct the question still remains whether or not such increases are temporary. A return to prosperity might mean a return to parochial high schools.

It is an unusual situation for grades 9, 10, 11, and 12 to continue to shoot upward in membership while the lower grades which supply them with pupils have steadily been losing ground for six years, particularly when a wave of decreased membership, by all the "dope," should have taken place in 1930 in the 9th grade or in the 10th grade at least. This phenomenon is highly interesting from an academic or a curiosity point of view, but from a practical standpoint the situation has created considerable uncertainty in the minds of those charged with the responsibility of recommending school building construction to meet present and future seating needs in Chicago.

(See editorial page for comment.)

California State Committee

ΦΔK

The California State Committee of Phi Delta Kappa has recently been organized under the leadership of Rudolph D. Lindquist, District Representative of the Western District. The first meeting was held in Fresno, October 25, 1930, and plans now call for a second meeting of the committee during March, 1931. Five alumni chapters and two active chapters were represented at the first meeting by A. R. Lang, H. B. Brooks, J. F. Bursh, Ivan Waterman, Charles L. Jacobs, Cedric Stannard, F. E. Tomlin, and J. A. Burkman. Others present were Walter E. Morgan and Rudolph D. Lindquist.

Brother H. B. Brooks was elected to serve the committee as secretary-treasurer. In addition to the consideration of other business, the committee approved the following recommendations: (1) that the State Committee recommend to the National Council that legislation be enacted permitting state committees to increase their membership to include a representative from each active and alumnus chapter, and (2) that the State Committee, on its own initiative, invite active chapters to send representatives to meetings of the State Committee.

The following statement of purpose was adopted by the committee:

(1) To seek to develop activities on the part of the active and alumni chapters whereby more of the research findings bearing upon current educational problems be made available to men in the field.

(2) To seek to influence research so that more of it will come to be directed toward problems which face school men at work in the field.

The recommendations to the active and alumni chapters adopted by the committee are as follows:

(1) That the active chapters be requested to brief masters' and doctors' theses on a form substantially as follows:

Author _____

Title _____

Institution _____

Date_____ For degree_____

Written under whose direction_____

Where filed _____

Problem _____

Source of data_____

Methodology _____

Conclusions _____

Digest prepared by_____

It was also receommended that a 6x8 card be used for the record.

(2) That copies of these brief abstracts be submitted to a centralized distributing agency to be established by the State Committee.

(3) That each active chapter submit, through its representative, at the regular meeting of the committee a list of research studies in progress, giving in each instance the approximate date of completion.

(4) That each chapter publish periodically in the chapter news letter a list of studies in progress.

(5) That each chapter undertake to secure a bound copy of each master's or doctor's thesis and that these be made available for

distribution through the central agency referred to above.

(6) That the alumni chapters devote at least a portion of each program to a discussion of the following:

(a) A review of research studies bearing upon current problems in education of statewide interest.

(b) A criticism of problems proposed by members for solution. This should result in the statement of a definite problem, a proposed technique for solving the problem, and suggested sources of data helpful in the solution of the problem.

(7) That the problems outlined in accordance with recommendation 6-b above be submitted to the State Committee through the chapter representative at its next regular meeting, it being understood that these will be compiled by the State Committee and submitted to Departments of Education for use by graduate students.

The following problems were proposed for discussion in the active and alumni chapters of the state:

(1) Shall Phi Delta Kappa undertake to publish or secure the publication of research studies of outstanding value which would not otherwise be published?

(2) How can the matter of questionnaires be controlled as to form and adequacy and as to the proper channels through which they should be sent?

(3) What shall be the activity of Phi Delta Kappa in connection with legislative problems?

(4) What steps should Phi Deleta Kappa take to promote the plan for assigning graduate students to work in city, county, and state departments of research as a regular part of their university training and to help in the solution of problems of these departments?

The above report is summarized from the minutes of the meeting which were prepared by Rudolph D. Lindquist. He said, in concluding his report of the meeting, that he came from the Fresno meeting with a greatly strengthened faith that Phi Delta Kappa can become, even more so than it has been in the past, an organization which encourages the application of careful systematic methods of inquiry to the solution of educational problems. The following statement appears in the November bulletin of Alumnus Epsilon chapter: "The State Committee marks a new venture on the part of Phi Delta Kappa and will supply a clearing house for research studies and other undertakings of Phi Delta Kappa brothers. It should play an important part in the solution of the educational problems of the state."

The California experiment will be watched by the membership of the other states and other districts with much interest. It is an ambitious undertaking and one well worthy of the support of every chapter and every member within the state.

Phi Delta Kappa Luncheon

DETROIT

The annual luncheon which is held in connection with the February meeting of the Department of Superintendence will be served in the Statler Hotel, Detroit, on February 24th, at 12:15 P. M. The present outlook is that we will have the largest and one of the best national gatherings at this time that we have ever had. Plans are well under way for the program including orchestra music, group singing, and an address by a prominent educator. The room which is reserved will accommodate 600 guests comfortably. It is equipped with public address system which is available for our use. We are thus assured of every convenience necessary, by way of physical equipment, to insure a satisfactory luncheon.

Alumnus Zeta Chapter will be host to visiting members of the fraternity. The chapter is also in charge of all plans for the luncheon and of the ticket sale. Brothers Harold B. Lamport, Harry J. Baker, and Don S. McGuire are members of the committee in charge. They have made arrangements for a meeting room in the hotel which will be a parlor adjoining the room allotted to the Executive Secretary. This room will be available as a social room, a meeting place for conferences, and for committee meetings on Sunday, Monday, Tuesday, Wednesday, and Thursday.

Put the date, the hour, the place, and the time reservation in your notebook now.

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Send copy for publication direct to the editor. Chapters should carefully edit all copy before sending it in. Members in the field are invited to send communications and contributions to the editor.

The Schools as an Investment*

To think of schools as an investment is strikingly modern. Curiously enough, no generation before this ever thought of schools just that way. The reason is that no previous generation ever saw school costs mount so fast that the money phase overshadowed every other aspect.

Are the schools, already by far the most costly single governmental service, such a good investment that school authorities can ask taxpayers for more and more money? Are schools such a good investment that we can ask parents, who have already sacrificed much, to deny themselves still more to maintain their children in our constantly lengthening secondary and higher educational institutions? To both questions the answer is "yes" for certain kinds of schooling and "no" for any other kind.

Under our system of government, voters decide the destiny of themselves and their descendants. Manifestly then, any schools that make these voters more intelligent and social minded, are a good investment. There is no other conceivable way of getting as good or as quick returns on these items for the same money, as in schools which all children must attend. This is precisely what our forefathers had in mind when they laid down the state constitutional provisions for free public schools. The content of school work has broadened a good deal since those early days when even grown men did not need to know much about affairs outside their immediate neighborhood. This minimum has consequently required more and more years. By common consent it now includes high school for all children whose parents can manage to keep them there, and higher education for many.

Schools that produce more than they require for support, are a good investment. Thus a state university or agricultural college may produce some scientific discovery that will add more wealth to the state than the institution has ever cost. This has been the case with the Babcock milk tester in Wisconsin and a process for utilizing coal in Illinois. Such an institution is of course a good investment. Any training necessary to make children self-supporting later instead of public charges or dependents upon their relatives, produces more than it consumes and hence is a good investment. Any school that makes children law-abiding and gives them worthy ways of utilizing their growing leisure as the work-week shortens, is a good investment. It produces more than it uses. The wrong kind of school helps drive children to be lawbreakers, to prey upon society and hence to cost the taxpayers a great deal for court and prison expenditures.

School service for adults, now starting on a large scale, is a good investment. It brings them up to date on things necessary for success in their vocations and so makes them more productive.

Taxpayers sometimes feel that their schools are so inefficient that the support should be greatly reduced or even cut off. But usually, save in such cases as small rural schools, this

*American Education Week Broadcast, Armistice Day, 1930, Auspices of National Education Association over Columbia Broadcasting System.

is not sound financial procedure. Any good business man knows that he often has to spend more money to bring to a dividend basis an investment which is not yet paying. In most states, the state aid for schools is not a good investment because it has not yet been brought to a paying stage. Started to equalize educational opportunity, it fails to do this. Such states need more state aid distributed on the plan used in New York to bring their school support to a good dividend basis. Also many states need more money for teacher training before their present school investment will pay satisfactory dividends.

In one respect the right kind of public school is the wisest investment we can make. This is because the public school is the most effective conserver and developer of our most valuable source of wealth, the brains of the children. All these brains in the entire country would probably not even fill the Capitol at Washington. But upon the way these brains are trained, and upon the way they work and produce, depends the future of this country. We could scrap all our wealth, modern achievements, and inventions; but if we preserved our tools of education, chiefly books, and the brains trained to use these tools, we could in time reproduce all our present wealth and even add to it.

Unfortunately not all of the schools we are called upon to support have good training for citizens. Not all of them are productive. Not all of them have enough money to bring them to a good dividend basis. Not all of them care properly for the precious brains. But whenever one of us helps to direct the public schools aright on these matters, he is helping to make a better investment of what is already probably the wisest expenditure of public money we ever make.

CARTER ALEXANDER.

Chicago School Statistics

The interesting article which appears on pages 108 and 109 in this issue was written by Brother Rogers, National Secretary, and Director of the Bureau of Building Survey, Chicago Public Schools. The situation described is so unusual that we are led to inquire of our readers whether they know of any similar situation. Does this phenomenon have its counterpart in any other large city in this country? Brother Rogers, whose address appears on the opposite page, would be pleased to have reports from those who have such statistics at their command.

The National Directory

For a number of years Phi Delta Kappa has been considering a national directory of its membership. Members have urged its preparation and successive National Councils have hesitated to authorize the undertaking. The last National Council was convinced of the need for such a directory and authorized its preparation by a special committee but with very severe limitations placed upon the committee and with no financial provision for clerical help or for the preliminary expense of printing, postage, and supplies. The motion which was passed by the Council was as follows: "It is moved that the Executive Secretary be empowered to prepare and cause to be published a National Directory of the membership of the Fraternity; the form of which is to be determined by a committee composed of the Executive Secretary and Brother Abel J. McAllister; the cost of which is to be partially defrayed by such advertising as may be considered fitting and proper by said committee, and *the remainder met by subscription prior to the date of publicaton.*"

The preliminary financial problems have been solved and a directory is being published. It will consist of approximately 448 pages, our national-magazine size. It will contain a brief fraternity history, the Constitution and By-Laws, an alphabetical list, a geographic list, a buyer's ready reference listing of advertisers, and some miscellaneous material. A direct mail appeal for orders is now under way and members are urged to do their part by placing orders, with cash, as soon as possible. The price is $2.40 postpaid.

Greetings

To all our readers, greetings and best wishes of the season. May the festivities of the Christmas season mingled with a Christ-like spirit of unselfishness and joy in service give to all new hope in living and new zest in doing.—Editor.

AS THE AUTHOR SEES IT

(Please Send Contributions to the Editor)

Objective Type Tests in Engineering Education. Clair V. Mann. This book was sponsored by Engineering Foundation, Inc., and published by McGraw-Hill Book Co., both of New York. Cloth, 6 x 9, 122 pp., illustrated with drawings and charts.

This book deals with the aptitudes of engineering students for certain engineering subjects including drawing and descriptive geometry; also with the training of engineering students, and classroom measurement of the effectiveness of the training. The administration to the author's own classes of a series of experimental objective type tests designed for use at the college level is discussed, together with the results obtained both from the "placement" test at the beginning of the year, and from the various drawing room tests later given. Because the peculiar language of the engineer is mechanical drawing and descriptive geometry, and because to date objective test materials in this field have been little experimented with, the study contributes original materials for the use of engineering educators in general.

The tests experimented with are designed to test knowledge of subject matter, power to think in terms of it, and power to make the desired useful applications of the course materials. Many of the test forms are unique in their mechanical arrangement, and the trend is distinctly toward that type of test which can be scored mechanically, by machinery.

As published, the book is rather an extensive abridgment of the original doctoral dissertation, which was in two volumes. Only half the first volume appears in the book, and many of the experimental test forms contained in the second volume have not been printed because of the cost of publishing this type of material. However, the book covers fairly well the general problem involved, and indicates, perhaps adequately, what a fertile field lies in this direction.

The tests devised and described were constructed during the 1927-28 school year. The study, the beginning of which the book describes, has been continued during the school years of 1929-30 and 1930-31, with highly interesting results. Objective measures are being made of the benefits derived from sectioning 200 freshmen engineering students on the basis of ability. Tests of the power to visualize—a valuable asset to the engineer—are being devised and used. Tests which measure perfection of vision, kinaesthesis, tactual sense, and motor coordination, all as used in engineering drawing, have been devised and are being used and standardized. Aptitudes for engineering, in general, are being studied in connection with this whole program.

Suggested by the national study of engineering education, sponsored by the Society for Promotion of Engineering Education, this whole study has been the most absorbingly interesting experience of my life.

CLAIR V. MANN.

Supervised Student-Teaching. A. R. Mead. Published by Johnson Publishing Company, Richmond, Virginia.

Supervised Student-Teaching was written as a basic treatise for the direction of laboratory school work in the preparation of teachers. No such treatise existed in the United States, when the author began work on it, and a need impelled him to undertake the project.

The book is organized into three sections. Part I attempts to provide some elements of a theory (philosophy) basic to the preparation of teachers. Part II attempts to picture the work of the student-teacher. Part III presents a consideration of the major problems in the administration of laboratory schools. An attempt is made to provide data on existing conditions, to present a critical discussion and recommendations for improvement. Such subjects as the following are discussed: history of the

work; objectives of teacher preparing work; how learning to teach uses the psychology of learning; value and the need for such work; ethical problems involved; critical consideration of study of teaching by observation and of the nature and use of participation; some basic conceptions of supervision; the work and activities of student-teachers; selection and assignment of student-teachers; amount and kind of laboratory work in preparing teachers; evaluation (rating) of student-teaching; types of laboratory school systems; the staff of the laboratory school; laboratory school buildings; the legal status of laboratory schools; cooperative laboratory school systems; support of the work; standards; and an ideal organization for present needs.

Parts I and II are of value directly to student-teachers. The entire book should be useful to supervising teachers (usually known as critics), directors of laboratory schools, administrators in cooperative systems, state departments of education, and presidents and deans of institutions preparing teachers. It contains material adapted to use in class work for those institutions which prepare workers for teacher preparing institutions.

For quite obvious reasons, much valuable material has not been included. There are many plans of excellent laboratory school work which had to be omitted. There are few data on foreign systems included. Material on curricula of laboratory schools is practically non-existent at the present time. Many documents, very useful to administrators, were not included. The author and the editor contemplate a second volume to cover some of the omissions.

The book contains an analytical table of contents, a detailed index of twenty pages. The book contains 891 pages, is supplied with illustrations, diagrams and much tabulated material.

A. R. MEAD.

How We Become Moral—A Comment on Public Education. Oscar F. Weber. Published by Richard G. Badger, the Gorham Press, Boston, 1930.

This is not a defense of our youth,—for they need none,—nor yet a diatribe or invective against our age. It is a plain statement of many of the most important aspects concerning the needed reforms in our educational policies. The fact that the integration of our wholesome individual personality, capable of entering into functional social-economic relationships in our democracy is stressed, is not incidental. This is the issue we must face squarely. We are the master builders, the architects of our civilization through the education of our youth in a sense far more completely than we have yet realized, far more completely than now appears from the haphazard and formal way in which we face our educational issues. It is our supreme responsibility to build well, and as the engineer will not erect a structure, to see if it will bear the strain and stress for which it is intended, so we, who are responsible for this "house not built with hands" but eternal in the universe, must see that we rely not on reformation, but on the proper initial integration of a socially adaptable personality. We must build well in order that every member of the group may withstand the strain and stress of our times—meet his social-civic responsibilities,—his duties in the home, in the church, in modern industry with all its technic improvements,—square his conduct with science and yet retain an abiding faith in an underlying system and order.

The glib and reassuring dissertations on character education and moral education that enjoin upon us faith, hope and charity but especially charity, are among our most dangerous anæsthetizers. You cannot possibly solve a problem by evading it or covering its issues in the glittering generalities so soothing to our all too overworked and frayed nerves. We are just beginning to approach seriously and with painstaking persistence all those fundamental and essential problems for which we have been willing to accept the ready-made answers of the earlier dreamers. What education needs now is constructive educational engineers to follow those pioneer thinkers, Eliot, Dewey, Bagley, Thorndike, Bode, Kilpatrick. It is hard work, this matter of being serious and scrupulously honest with ourselves in the constructive attack on the fundamental problems of education. But we must come to realize that the royal road had no open right-of-way to any field of learning. The only way of access to functional citizenry is through functional personal integration.

A casual survey of the book will disclose the character of the thought underlying its organization. Chapter I merely presents the viewpoint that youth is eternal, that it is nature's way of perpetuating the race and that every age must avail itself of the op-

portunity to make it the period for assuring to future generations the benefits of all those technic improvements that a growing civilization has superimposed upon natural conditions. Chapter II recognizes as the greatest problem of any age the sane approach to this question of racial regeneration and social continuity and Chapter III emphasizes the importance of our American public high school as the keystone of our technic system of education built up for this purpose. Chapter IV warns against the false moves we have made and are making in the attempt to lessen the labors of our task or to evade our essential responsibilities. Chapter V is a sincere effort to point out the essential need for high scholarship and thorough professional training on the part of all those who are responsible for the education of youth, but particularly those in charge of our public high schools.

With Chapter VI, these fundamental considerations are laid aside and the question of the integration of the individual personality is taken up. This is followed, in Chapter VII, by admonitions in regard to the fallacy of undue faith in the efficacy of reform in personal habits, traits or character, ideals and attitudes toward life, once these have been engendered and inculcated. Then Chapter VIII stresses the importance of the acceptance of the policy of integration through actual participation and the development of personal worth through work. Chapter IX presents some aspects of socially useful integration through sound educational procedures while Chapter X points out the instances to the contrary through our neglect. Chapter XI proposes some types of educational reform that are deemed necessary to tide us over until we face more courageously the larger problems of reform. Chapter XII is a concluding statement.

OSCAR F. WEBER.

Problems in Public School Administration—A Plan and Work Book for Public School Administrators. Oscar F. Weber. Published by The Century Company, New York City, 1930. xxxviii+726 pp.

Every young man who is in training for service in public school administration should be seriously concerned about the acquisition of those abilities that will enable him to start off right when he attacks the actual duties of his office. Here we are confronted with precisely the same question that confronts us in general education. Many have insisted that, if we are to prepare for the actual duties of life, then education must be "stripped of its formalities" and the "actualities" of life "brought in." Such a doctrine is far more easily held than put into practice. It is easy enough to say that they should partake of the "verities" of actual practice. Where shall we get them? There is no general acceptance of the plan requiring a period of interneship. At best the most advantageous use of interneship would still leave many who are to serve in the lesser administrative capacities unprovided for. Analyses of actual school situations calling for a "survey" will help to give some insight into a few of the actual problems of the public school administrator. As a rule these cooperative inquiries are critical enough; they lead to thorough studies, systematic reports of findings, and careful recommendations for remedial procedures. Nevertheless, there can be no doubt that they stop at the very place at which the superintendent should begin his constructive program.

Some attempt has been made to introduce the case method into educational procedure in professional training classes in public school administration. The trouble is that there are, and, for that matter, can be, no *bona fide* "cases" in public school administration. Any effort to make it appear so merely makes a farce of the whole matter of professional preparation. The public school administrator will have to meet situations, many of them. But these situations will always be specific. They will have a definite community setting. Every one of them will have to be submitted to close analysis. The factual material that can be brought to bear in any one situation will differ materially from that applicable in any other. As a rule, any single situation that will confront a public school administrator will have to be solved in a certain temporal interval without any great interference with the regular work of the school. In the larger places the actual work that the public school administrator himself can do will be very limited. His contribution will be to discern and define the problem, to outline the plan of attack, to suggest ways of procedure, to coordinate the efforts of others, to stimulate and encourage them both when failure looms ahead and success crowns their efforts.

This plan and work book for public school administrators is an effort to oblige

the novices in public school administration to face actual situations, not mere "case set-ups," to see the problems in their entirety, to scan educational literature for the possible solutions others have offered, to check, evaluate, and weigh the worth of their contributions in terms of their own needs, and to inculcate critical judgment in arriving at acceptable plans of procedure of their own. The author's own students invariably complain of the "confusion" that confronts them on the approach of these problems. This is a wholesome sign. It is far better that this siege of "confusion" come during the period of training than that it come on the approach to the problems in actual practice. It is far better for the student to get his bearings now than to be obliged to flounder around later when time and energy alike may be far more precious. Stress is placed on the ability of the learner to perform a specific kind of service in a field of work where his knowledge must be put to the test of practicability. On the other hand, every precaution has been taken to avoid the restrictive influence of specific "case" requirements. The nature of the provision for the training of the individual is left to the good judgment of the instructor and the development of the interests of the student. It is an attempt to make the training of the superintendent of schools broadly professional rather than merely academic.

It is the hope of the author that through this volume he will do something to stimulate the individual endeavor of the prospective candidate for professional training in public school administration and will also provide at least a check-list of the possible plans and the work activities of the administrative practitioner in the field. It would have been much easier to present a logically straightforward and continuous exposition of the facts pertinent to successful public school administrative work. It is to be hoped, however, that the lack of such continuity is richly compensated for by the challenges to the individual student, and that each student in turn will get, through the harmony of his own essential acts, a finer type of continuity than any which the author might have presented.

—Oscar F. Weber.

The University of Chicago Experiment

Roy W. Bixler

AN ADMINISTRATIVE reorganization at the University of Chicago, the result of considerable preliminary study and experimentation, lays the foundation for a major experiment in higher education.

The plan adopted provides a well integrated program at all levels of education in the Arts, Literature and Sciences. It has given real meaning to the Junior Colleges by designating them as a separate division of the University, to be known as the College of Arts, Literature, and Sciences, and assigning to this renamed and reorganized unit the specific function of general education. In order that the college may be properly articulated with the upper divisions, each member of the college faculty will be also a member of the faculty of a division. It has provided complete articulation of the Senior Colleges and Graduate Schools by bringing them together as a new educational unit and subdividing them, thus consolidated, into four divisions, the Humanities, the Social Sciences, the Physical Sciences, and the Biological Sciences. To these divisions and to the professional schools, has been assigned the function of specialized training. A dean has been appointed to preside over the College and each of the upper divisions. The work of the five divisions will be coordinated in the Dean of the Faculties and the General Administrative Board.

Under the improved administrative conditions gained by the new plan, experiments will go forward, with renewed vigor, in the revision of the curriculum, the establishment of new standards of student achievement, and the development of the comprehensive examination for the measurement of student progress. As a result of these experiments, educational objectives should be established at each level; the best methods of guiding the students to the attainment of these objectives should be discovered; and the comprehensive examination should be perfected.

When all of these things have been

achieved, students will graduate from college whenever they can demonstrate, by passing the comprehensive examination, that they have a general education as defined by the curriculum and encompassed by the examination. Those who merely pass will be granted an "honorable exit" from the University. Those who pass "with a satisfactory degree of excellence" may enter one of the divisions or a professional school and become a candidate for a Bachelor's, Master's or Doctor's degree, or a professional degree. Graduation from an upper division, like graduation from College, will be contingent upon passing a comprehensive examination.

Better coordination of all functions of the educational program of the University will be secured, because the plan establishes divisional autonomy as a substitute for departmental autonomy. For example, the budget devoted to the several educational functions will be controlled by the divisions instead of by the departments.

This should result in the improvement of the educational functions at each level. The function of the College will be, primarily, to make a contribution to general education and not to train research workers, and the College, having control of the funds devoted to general education, will use them for that purpose. The function of the divisions will be, primarily, to make a contribution to specialized training and research and, the Division having control of the funds devoted to specialized training and research, will use them for that purpose.

Under the system of departmental autonomy, the function of research is commonly overemphasized in the distribution of funds for educational purposes, because the departments are interested primarily in research. Under the plan adopted at the University of Chicago, the upper divisions may overemphasize research, but the College cannot do so without disregarding the function for which it exists.

So many details remain to be worked out that it is impossible to describe the plan except in quite general terms. For example, it is certain that courses will be reorganized and it is assumed that the comprehensive examination will take the place of course examinations, and that the whole system of credits and grades will be overturned, if not overthrown. However, there are so many problems to be solved in the development of a substitute for a system of long standing and universal use, that nobody knows at this stage how it will be done. The plan is admittedly an experiment. The University is committed to conducting it scientifically and it is impossible, of course, to know where it will lead.

It is hoped that progress will be made toward the elimination of two evils in American Education referred to by President Hutchins, first that too much attention is accorded those who do not need it, do not care for it and do not deserve it, and second, that it takes too long.

Charles Dawes' Creed

A Paraphrase

If you work in a profession, in Heaven's name work for it. If you live by a profession, live for it. Help advance your coworker. Respect the great power that protects you, that surrounds you with the advantages of organization, and that makes it possible for you to achieve results. Speak well for it. Stand for it. Stand for its professional supremacy. If you must obstruct or decry those who strive to help, why—quit the profession. But as long as you are a part of a profession do not belittle it. If you do you are loosening the tendrils that hold you to it and with the first high wind that comes along you will be uprooted and blown away and probably you will never know why.—*From Journal of the National Education Association.*

There are more people in the world now than ever before, as shown through figures compiled by the International Statistical Institute. The total was given as in excess of 2,000,000,000. These figures include the following estimates:

Asia	950,000,000
Europe	550,000,000
North and South America	230,000,000
Africa	150,000,000
Australia	7,000,000

It was recalled that in May, 1927, figures prepared by the League of Nations estimated the world's population at 1,906,000,000.

Beyond the Curriculum

Coleman R. Griffith

I

A FAMOUS psychologist of the last generation used to say that the progress of human knowledge reminded him of the surging waves along the forward edge of an incoming tide. Now and then, through the eye of his mind, he would see waves of unusual force throw themselves far up on the shore only to fall back again because they had ventured too high above the mean level.

In this dramatization of advancing knowledge there would appear to be as many failures as successes if we had eyes only for the waves, but if we could have eyes for the whole moving tide we would see that, in spite of the uncertain come-and-go at its forward edge, the whole mass was slowly but surely rising to a new level.

This was one man's way of picturing the nature of progress in science and in knowledge. He saw new facts and new assertions leap out in advance of the main body of knowledge only to be gainsaid or withdrawn, —and was discouraged; but he looked again and saw that the tide had risen,—and was comforted.

II

Such contrasts between the capricious forward edge of thinking, the somewhat tumultuous region of trial and error, of study and exploration, or search and research, on the one hand, and the sober, slowly-mounting body of attained fact, on the other hand, stand at the source of one of the most persistent of the unsolved problems of education theory and practice. Near at hand we see knowledge in the making and we see the unique kinds of mental talent that makes discovery possible. Farther away, where perspective levels out the uncertainties of problem-solving we see the body of knowledge that has been made, and we can see, too, the processes of learning, or drill, and of discipline that are called for if one is ever to immerse himself in the world of plain fact. Just as the foaming and opaque waters of the surf resemble the shifting and dimly understood processes of creative effort, so the deep-running and solid mean level resembles that vast body of information which calls so insistently for the hard exercise of our ability to learn by rote.

The point we wish to make is so fundamental that we shall change our figure of speech and illustrate it again. The getting of knowledge is a flexible, metabolic process like the vital processes of root, trunk, branch, and leaf of a tree. Research, exploration, investigation, the active and sometimes insurgent processes of creative thinking, stand closer to the dynamic events of nature than they do to its statics. Facts, assertions, and propositions are fruits of a process. We speak of the fruit of the tree of knowledge; but it would be more fitting to think of seeding rather than of fruition for in seeds the fluent processes of growth have nearly ceased. Seeds dry up and become points of departure for further growth only because they are latently germinal; and this latency does not manifest itself until the seed is acted upon by new vital processes. So with "inert ideas." We discover knowledge; knowledge ripens, dries, and is stored away. It is then fit to be taught. It comes to life again only when we stop rote learning and begin to reflect, to consider, to ponder, and otherwise to make what we have learned gain significance for us because it has been fused into new relations. Men with the spirit of an adventurer create history and students who practice like animals learn history. Men who dare to ask questions discover laws and students who acquire the right kind of verbal skill trip them lightly off the tongue. Men think and inventions come to pass. Students try to copy the inventions.

This contrast between the forward edge of knowledge and the main body of stable fact finds its first significance for education in the assertion that textbooks, and especially elementary or introductory textbooks together with the curricula that are based upon them, should lag behind the forward edge of research by ten and sometimes twenty years.

It is now more than twelve years since the close of the World War, but even yet we are not so sure of our perspective on the events of that war, or upon its origins, and certainly not upon its results, that chapters in the textbooks of modern history can tell about these recent experiences with the same unemotional dryness that they tell of older events. In physics, it is now twenty-four years since Einstein's original paper on relativity and yet our totally inadequate perspective on this event still stands in the way of a proper reorganization and stabilization of the facts of physics at the textbook level. Fast-moving sciences, like psychology and the new physics, have a narrower gap between discovery and the textbook, a closer contact between shifting surf and stable tide and this, perhaps, is a good reason for the fact that a half-dozen books on psychology appear to describe, not a single science, but a half-dozen conflicting sciences.

Temporal distance, therefore, like spatial distance, is said to guarantee proper perspective. In this way, we make textbooks and curricula "safe." After we have stripped from them everything that suggests the unique processes by which they were created, students will reward us with a smile because we have made knowledge so definite, so coherent, so easy to grasp, and so easy to learn.

We may mean to say, then, that there is a magic about knowledge-in-process, a quality about the burning edge of research which differs mightily from the material that comes to be frozen in textbooks and in curricula. There is a difference also in the quality of the minds that create knowledge as opposed to those who think as the Literary Digest writes. These differences rest on contrasting types of mental talent; they are not due to the mechanical difficulty of keeping textbooks up to date, and neither are they a temporary or evanescent aspect of curricula. A curriculum always contains something to be mechanically learned, something with respect to which a person is trained. The more definite and precise it is, the more economical the learning process and the more efficient our methods of teaching or of training. The matter runs still deeper, however. The very organization of the American school with its flare for quantity production and a standardized product means that curricula must be standardized. They must take shape. They must avoid every semblance of originality or lack of definition. Their complete inadequacy to convey impressions about the nature of man's restless search for knowledge or to train men in the qualities which lead to exploration is one of their permanent features. The simpler the level of instruction the clearer does this aspect of the curriculum appear, a fact which means nothing but intellectual tragedy when we remember that on the average more is done to the quality of a child's mind and character before it is ten than can ever be done afterward.

Nowhere do we find a better illustration of the fact that curricula are the frozen assets of our noetic talents than in the common knowledge that some subjects do not lend themselves readily to curricular organization. The alleged science of psychology has been famous for just this reason. The flexible, shifting activities of the creative intellect cannot be put into dry ink. The fluent and ever-changing qualities of men, their shifting philosophies, attitudes and disposition, shades and nuances of mood and sentiment; in other words, the creative and emergent quality of mental life resists every attempt to make it conform to the printed page. There are no textbooks about good judgment or about the infinite variety of personal quality. Poets strive to imprison some of these wisps of the full-blown mind in phrases of poignant quality, the painter sometimes catches them in a wistful smile made out of oil and canvas, the philosopher now and then chains some of them to categories invented by his intellect, and the musician may catch some of them in haunting melodies that are lost to us the moment we hear them. Somehow they continue to escape us. The psychologist alone insists that they can be put into a textbook and be made a part of the curriculum. But what he gets is some anatomy and physiology, and a gross caricature of the real genius of mental life in what he calls the science of psychology. Studies in the art of living, the processes of thinking, and the secrets of feeling demand a living contact between person and person. They are not easily put into the printed

page nor are they easily read therefrom.

It is sometimes said that nature appears to us in infinite variety. No two leaves are exactly alike and the chances are a billion against one that thumb-prints will be alike. The biologist makes two uses of such facts. For taxonomic purposes he forgets small differences. All oak leaves are oak leaves and thus they are classified; but when he goes to a theory of evolution, small differences become much more important than anything else for it was only by continual slight variation and selection that biological progress was made. Education faces these same facts. People differ from one another. The experimental psychologist said, "We shall abstract from the difference and write out an account of the typical, average adult." This was creating a science at the expense of the most important thing in the world, viz., that personal differences, unique patterns in character, that originality in thought and conduct, have more than a remote biological or survival value in the affairs of men. The very excuse we have for living and the justification we place on the aim of life rests in the fact that we can and shall be individually distinctive. Man differs from the animals because he has personality and personality is a word that implies discreteness rather than identity.

We mean to assert, then, that there is a profound difference between the curriculum and the genius which creates it. We mean to say that the process by which we become acquainted with the contents of a curriculum stands in sharp contrast against the novelty of original thinking, good judgment, and rich personal quality. It is this difference which will make it forever impossible for us to put such events as thought, personality, and individual character within the confines of a curriculum; and it is this same difference which makes close adherence to the curriculum the surest way of stifling the creative effort which brings organized knowledge to pass.

III

All of these facts are plain, of course, even to him who runs. But we would not have become so conscious and hence so disturbed about them if they had not led directly to the origin and development of an educational psychology which makes a caricature out of mental life.

In the beginning of these was the assertion that, since the curriculum is an organization of stuff to be learned, the laws and principles of learning are items of first importance to education. The multiplication table, the facts or events of history, Latin declensions, the ins and outs of civics, and a million other items stand ready to become second nature. It was inevitable, therefore, when education became "scientific" that the whole educational process should have been centered for a season, upon the functions and nature of learning. We must learn to multiply and to divide, we must learn to speak correctly, either in our own or in another language, we must learn to know the main events of our national history, and so we are trained. But are we educated?

There was, in the next place, the fact that learning can be studied experimentally. Education and psychology came together so nicely only because learning is one of the aspects of human nature perfectly adapted to the task which education has imposed on us through the idea of the textbook and the nature of the curriculum. Education said, "Here in the curriculum, is something to be learned." Psychology answered, "Here are the laws and principles of learning. This is the way in which your task can be most quickly and most economically accomplished." Thus Educational Psychology was born.

The initial studies on the psychology of learning were performed, as was natural enough, with human beings acting as subjects. It was soon discovered, however, that the problem was not as simple as at first it appeared. The greatest difficulty lay in the fact that human beings make so much use of the meanings of words and of objects and of the rich associations they create that the initial laws and principles did not even resemble a science. Two methods of experimentation were created to handle this situation. One lay in an appeal to nonsense syllables, mazes and other mechanical devices and the other lay in an appeal to animals. The success of research was almost immediate. Laws and principles of learning which, up to that time, had

been hazy and unreliable, now became objective, clean-cut and authoritative. Education had at length achieved the right to take on the descriptive adjective "experimental" and psychology had once more found a reason to call itself a science.

This felicitous result had been attained, however, by taking out of learning the one thing that makes it distinctively human rather than animal, viz., meaning or significance. From the point of view of meaning, from the point of view of any kind of learning which is not sheerly mechanical, nonsense syllables and mazes are the worst material one could find for the study of the major types of human learning.

The same argument holds with respect to studies on the way animals learn. Even when the best is said of it, learning by trial and error or by the conditioning of reflexes is a mechanical process. But an educational psychology based upon the way animals learn suffers by an error of omission as well as because it hits completely beside the mark. Learning through sheer mechancal repetition is not the only way animals learn. Kohler has shown that animals learn quickly by insight as well as slowly by sheer repetition and this learning by insight appears to be a law unto itself. As a psychological fact, learning by insight has many kith and kin among other types of mental life all of which proclaim the fact that rote learning, even though it may be the most ancient, is after all, one of the less important qualities of men's minds.

IV

For almost two score years we have worshipped nonsense syllables and mazes. The consequences of our idolatry in psychology and education are so many and varied that a statement of them would exceed the span of this paper; but two or three of them are worth mentioning briefly. The first is that there is no other way in which the foundations of knowledge can be established save by drill upon drill, habit upon habit, practice upon practice. The very fact that one kind of learning is subject to laws and principles, in other words, the fact that minds and nervous systems cannot be hurried, or treated carelessly, or called upon to do the miraculous, signalizes the fundamental importance of drill and discipline.

We cannot afford, therefore, to make the mistake of trying to teach too much, as though all the problems of education could be solved by creating a new textbook for a new curriculum so that we can learn a new group of facts. Neither is there any call upon us to try to soften the discipline of rigorous study as is done even in university courses where textbooks are outlined and examination questions of modern and ancient vintage help students to previse the latest prejudice or interest of his instructor. That part of education which rests upon rote memory is a serious business; it should be a heroic life; it should make students sweat; but gaining verbal skill in parroting the facts of several curricula is not the whole story. The test of an education depends upon what a man will do with his skill and whether he can go out and let it be known that, as a person, he has become something new in the way of individual quality.

And then there is the question: what are the by-products of drill? We have said that rote learning is a process through which we pass in order to make language habits, historical facts, arithmetical processes, and the like, second nature. If this is second nature, can we gain first nature out of it, for our first nature, our best quality, is not seen in the way we learn but in the way we use what we learn. But do we learn to use knowledge and to create it by having drilled and disciplined ourselves in the processes of learning? For a long time we have believed that we could. Even so late as 1929 Whitehead has said: "If in after life your job is to think, render thanks to Providence which ordained that, for five years of your youth, you did a Latin prose once a week and daily construed some Latin author . . . . I need not remind my readers that I can claim Plato's authority for the general principle I am upholding."

This is, of course, an old and familiar friend, viz., the problem of the transfer of training. Here, if ever, educational theory and practice fell into a strange paradox. Educated men did, as a matter of fact, increase in mental stature. Somehow or other, men have become original and creative in their

thinking in spite of their schooling. Somehow or other the fund of human knowledge has been expanded. Somehow or other unique characters and personalities have emerged out of plain beginnings. Everyday the problem as to what should be and what should not be put into the curriculum has become a more serious question simply because men are more than learners; they have somehow managed to become creators.

And yet experiments on the matter have signally failed to show how the creation of a creator out of a rote learner is possible. The answer to this paradox is, of course, fairly simple. Rote learning means making verbal or manual skills more and more fixed, that is, more and more useful in a specific way and less and less useful in a general way. It is an interesting fact that the amount of transfer of training found in the experimental literature on this subject varies directly with the preciseness or mechanical quality of the learning problem used in the experiments. The more mechanical the learning, the less the transfer. The more general or the more meaningful the problem the greater the transfer and incidentally the less accurate the measure of transfer. In other words, it was not possible to increase the psychological quality of the experiments in transfer and increase the accuracy of measurements at the same time, a situation which has many parallels to the inability of the physicist to measure, at one and the same time, the absolute position and the absolute speed of an electron.

This result was, of course, a direct challenge at all attempts to promote the use of the laws of mechanical learning in the schoolroom and consequently to make curricula and textbooks more and more ritualistic. It was a direct challenge to the proposition that the best methods of teaching can be given a formal or logical expression in textbooks. It even raised the question as to whether there are any methods of *teaching* at all, but only methods of training. Human beings are *taught;* animals are *trained;* and many of our problems in education are raised by the fact that we try to train human beings.

V

But we continue to mention old and familiar facts. We mention them, however, because of an assertion that issues from them. Educational Psychology has gone far enough in basing its methods, its program of research, its attitudes toward the aim of education, and the like, upon a psychology of mechanical learning.

If the primary talent of human beings were ability to learn through practice or through sheer repetition, all of the facts about learning drawn from nonsense syllables, mazes, and from animals would stand the educator in good stead; but it appears that nature has had other things in store for men's intellectual life. Learning is only a means to an end. The one and great distinctive thing about man's mind is the fact that he can solve problems, that he can exercise good judgment when turned loose among the words, ideas, and facts that have been learned; that in the use of his judgment he can display more or less initiative and aggressiveness, that in the development of his personality and character he can arrive at a kind of uniqueness and individuality of which the words "creation" or "emergent" provide the only adequate description. Facts to be learned are only the residue or the precipitate which is left after original thinking, good judgment, and the infinite variety of personal quality have been dissolved away.

We get a strong suggestion of these facts from the history of man's nervous system. It looks as though nature had spent millions of years fabricating a brain in which some other mode of activity was possible than mechanical learning. Learning is one of the talents of the lowliest animals, perhaps also of inanimate objects; but even though there is a tremendous difference in level between the profits gained by animals versus those gained by human beings from past experience, learning does not describe the whole range of talent among men. We like to call ourselves big-brained animals and the men who know about such things say that this big brain was developed not as a simple expansion to powers of learning—which already were capable enough—but for the introduction of a new kind of mental life. It was in this new kind of mental life that man was said to stand only a little lower than the angels.

The burning question in education has become: What can we do to aid nature in this great adventure? Can problem-solving be taught? Can we learn to use good judgment? Is there any way in which we can develop our first nature, our talent for meeting new situations in a constructive and sensible way? How can we get an intimate and creative sense of personal responsibility to emerge out of thoughtless acting? Can we do anything to create personalities fashioned after a heart's desire in which visions of what men may become have blotted out vestigial memories of what he has been?

VI

This question has become so urgent in contemporary education that men everywhere have taken steps to change the situation by changing the nature and the whole temper of teaching. The project method of teaching was an answer to this situation. Other methods which have gained notoriety and the blessing of Teachers College, have also tried to copy Ezekiel's experiment of calling upon the four winds to put the breath of life into a valley of dry bones. At the present time our most serious thoughts on these questions center upon the notion of individual training. It is said that, if we learn facts, if we remain content with that which is fixed and stabilized in the curriculum we shall, when we are older have to learn again. The cry for adult education is a plain confession that an educational psychology based on the laws of animal learning is not an adequate type of education. Learning gives a man the material with which to work just as the incoming tide furnishes the mean level from which the surf will plunge. But learning, a store of knowledge, an encyclopedic range of information, a high mean level of data does not tell how a man will act. It says nothing about good judgment, about powers of organization and creation. It says nothing about the fact that man himself should be changed by education. It does not say that he has become a scholar. Recent emphasis in educational theory, therefore, has been toward the development of individual quality and toward the recognition of those powers or talents which are not touched by the mechanics of learning.

VII

There are, of course, a great many suggestions and proposals as to how this aim is to be gained. Among them all, however, I must confess a great preference for one that does not admit of laboratory analysis. It stands as remote from science as do the fundamental facts of psychology. It may be illustrated by the only way yet found for the teaching of initiative and aggressiveness, or of that ineffable quality of man known as morale. We may gain a suggestion about morale from one of our commonest impressions about life. Storms pass over it, diseases sweep it away, adverse temperatures and lack of food stand as constant enemies, it preys upon itself and is its own worst enemy, yet in spite of it all life has an insurgent quality about it that can be discerned even in a museum where its remarkable history is pictured only in footprints and bones. The quality of being insurgent, or irrepressible makes life a magic word and it is only when this magic is translated into a mental quality, into a type of spunk whose only analogue is the insurgent quality of life itself, that we see the real meaning of morale.

But morale is not taught. It is felt. It is suffused from one person to another. In dozens of ways we have tried to catch it and make it a formal part of our teaching but as yet there is in our University no chair of morale. Neither is there a chair of good judgment, or creative thinking, or of personal quality. It is he who sits in the chair that makes the difference between a curriculum to be learned and a personality to be created.

It was for this reason that we said, toward the beginning of this paper, that psychology does not readily become material for the curriculum. This means that a human personality is not the proper object of a science. To freeze the fluent thought and action and the infinite variety of human character into textbooks is to miss entirely the meaning and significance of friendliness, or personal contact, and of an intimate understanding of human nature. Beyond the curriculum, then, that is, beyond the professorial chair stands the occupant of that chair. It is the teacher who stands beyond the methods of teaching. It is up to him to put into the curriculum

everything in the way of education that is not now there. At the present time this means everything that is not mechanical and not easily put into a manner of thinking created by the laws of animal learning.

The teacher stands behind the curriculum. He may stand there trained in the laws of mechanical learning and in the methods of teaching based upon them. If so, he should be a good drill master and education might thank God for him. But beyond the curriculum and beneath what there is to be learned by rote there is something to be learned with the heart. Boys and girls should see visions beyond their books and know that there is a prophet behind the drill master. To teach as one having authority is to teach like a drill master in whom the seeds of knowledge burst the confines of any and every vessel and bud out in all directions. This is genuine scholarship and it marks the full measure of what we call being human.

And there is one more thing. Those who stand beyond the curriculum cannot afford to appear niggardly. As a matter of fact, there is every challenge in the world to become men and women of such generous mental and moral parts that the curriculum becomes only that bit of mechanics, that material conveyance which, for some unknown reason, things spiritual always carry around with them. This is a dimension of personality that is worth fighting for. It is even worth praying for.

News Items from Here and There

Do you know of any education news pertaining to your Chapter, School of Education, University, City, State, or your own School, which may, because of its general interest appeal, find a place in this section of the PHI DELTA KAPPAN? *If so, send it to the editor sometime before January 15 and it will appear in the February issue of the magazine. Some chapters send us the publications which carry the news of their institutions and we commend the practice to others.*—Editor.

PHI DELTA KAPPA BREAKFAST

Plans have been completed for a Phi Delta Kappa breakfast at the time of the Pennsylvania Education Association meeting. The breakfast will be held at the Lycoming Hotel, Williamsport, on Wednesday morning, December 31st, at 7:30 o'clock. A short program will be given in connection with the breakfast. All Phi Delta Kappa men are invited. Additional information may be secured from Brother G. C. Wolfe, Williamsport, Pennsylvania.

A. A. A. S.

The annual meeting of the American Association for the Advancement of Science will be held in Cleveland, Ohio, December 29, 1930, to January 3, 1931. Meetings will be held in the buildings of the Western Reserve University. Members of Phi Delta Kappa will be interested in the programs of Section Q, Education, and Section I, Psychology. They will be particularly interested in the annual dinner on Tuesday evening, December 30th, which will be a joint meeting of Section Q with Phi Delta Kappa and Kappa Delta Pi. Phi Delta Kappa has been associated with Section Q for a number of years and Kappa Delta Pi has recently come into the same relationship with the A. A. A. S. Although Phi Delta Kappa has had no official part in the preparation of the program or in the arrangements for the meeting, the fraternity will be well represented in attendants. Members of the fraternity are urged to reserve a place on their calendars for this annual joint dinner.

THE JUNIOR COLLEGE JOURNAL

The junior colleges have found their voice.

"The Junior College Journal," official organ of the American Association of Junior Colleges, published by Stanford University Press, makes its initial appearance in its October issue. Dr. Ray Lyman Wilbur, Secretary of the Interior and President of Stanford University, writes an introduction. Dr. Wilbur has long been a champion of the junior college movement.

"I look for a life of service and some turbulence for the Junior College Journal," says

Dr. Wilbur in his introduction. "Its mission of information, its policy of open-mindedness and fairness, and its publication in the area where there is the greatest present activity in its chosen field, all speak for the importance of its creation."

Walter Crosby Eells, of the Stanford University Education Department, is editor of the new journal, and Doak S. Campbell, of Peabody College, associate. The advisory board contains names distinguished in education and representing the entire nation; the journal is not limited to any one section. The style of the journal is brisk and readable, and the news element is featured. John C. Almack conducts the book reviews.

ACTIVITIES AT ALPHA CHAPTER

GUY L. FOSTER

Last year proved a good one for Alpha Chapter of Phi Delta Kappa at Indiana University, and the indications are that the present year will be even more profitable and agreeable. This renewed interest in fraternity affairs is largely due to the enthusiastic efforts of Forest R. Noffsinger, president of the chapter, and Prof. W. W. Patty, faculty advisor. Meetings are not only held oftener, but are made more profitable by affording an exchange of ideas on research topics which exchange is encouraged by having one talk at each meeting by either a graduate student or faculty member. These talks are usually on some subject on which the speaker is doing research, and have proved both interesting and worth while.

During the summer session, more than a hundred members were on the campus and on frequent occasions met informally at out-of-doors picnics to mingle in pleasant association and to try the skill of student and faculty teams in in-door baseball. It is the unanimous consensus of opinion that these informal gatherings do more to increase the feeling of fellowship than could anything else; that such a community of feeling is necessary to an alive and growing organization.

To remind us of the humble beginnings of Phi Delta Kappa and its present size, we have with us on the campus at Indiana University, Louis F. Hillman, a charter member of the organization. Mr. Hillman is Director of Education at Hanover College and is here completing his work for a doctor's degree.

The annual banquet on the occasion of the Indiana State Teachers Association was held Thursday, October 23, 6:00 p. m. at the Lincoln Hotel at Indianapolis. After the banquet, Dean H. L. Smith as toastmaster introduced the distinguished members seated at the speakers' table. After paying a tribute to Dr. George D. Strayer for the introduction of a new technique in the field of administration, Dean Smith presented him as the principal speaker of the evening. Dr. Strayer very forcibly presented the problem of a better world understanding as one worthy and needed in the field of administration.

At the meeting held November 17, Professor J. W. Jones, who was formerly at Indiana University, and who is now Director of Research at Indiana State Teachers College at Terre Haute and a member of Governor Leslie's State Aid Commission, presented some plans for equalizing educational opportunity which will be presented at the next session of the legislature. In connection with this subject, Professor R. W. Holmstedt of Indiana University discussed some measures of need which the Commission used in evolving the plans which they are to propose.

On November 7-8, Alpha Chapter was delighted to have as her guest Dr. Shelton Phelps, Director of Education at Peabody College for Teachers, Nashville, Tennessee, and national president of Phi Delta Kappa. Dr. Phelps was the principal speaker for the Principals' Conference which is held annually at Indiana University. Friday noon, the the chapter gave an informal luncheon in his honor in the Reserve Room at the University Cafeteria. Immediately following the luncheon, Dr. Phelps very ably presented some trends in the requirements for the Ph.D. degree, a subject of real interest to most of those present.

SUPERINTENDENT'S ANNUAL REPORT

A mimeographed copy of the annual report of Irving W. Smith, Superintendent of Schools, School District Number 1, Great Falls, Cascade County, Montana, was recently received in the national office. It is a splendid illustration of what may be accomplished in

a report of that kind, addressed to the Board of Education, by a superintendent in a comparatively small system. Superintendents of small systems who are concerned about the nature of their annual report to the Board of Education would do well to get in touch with Brother Smith from whom they might secure the loan of a copy of the report referred to above.

CHAPTER NEWS LETTERS

A number of chapters have issued excellent news letters since the beginning of the current school year. Among these should be listed the news letters of Lambda, Omega, and Upsilon chapters. Each of these have appeared in mimeographed form and each of them have been noteworthy for their news content. Other chapters are issuing news letters which will doubtless be in the mail by the time this issue of *The Phi Delta Kappan* reaches its readers. Among these are the news letters of Alpha Alpha and Zeta chapters.

Since writing the above, splendid news letters have been received from Alpha Nu and Sigma Chapters. Both are excellent examples of what may be accomplished by the chapter which attempts to keep in touch with chapter members. The letter from Sigma chapter is worthy of special comment. It is mimeographed in such excellent style and it contains such excellent copy that every member of Sigma chapter should be proud to receive it. The news letter is mimeographed in magazine form and it carries a special cover which is also mimeographed. Its appearance is equal in practically every respect to the appearance of a printed bulletin. We congratulate the chapter on its preparation of such an unique and newsy letter.

In this connection, it may not be amiss to comment upon the news letter of Alumnus Epsilon chapter, Los Angeles. This chapter publishes a monthly letter to its members. It is printed and carries the chapter news, record of attendance, personal items, and such other information as may be of interest to its readers. Other alumni chapters would doubtless profit by the publication of similar news letters.

PHI SIGMA PI FRATERNITY

Phi Sigma Pi is an education fraternity for men in Teacher Training institutions. The fraternity has recently published the first number of Volume II of its national news letter. It is a newsy four-page, four-column publication. "It is the plan of the national council to make this official publication a combination of professional journal and fraternal news sheet." The fraternity will hold its regular biennial national council in Detroit at the time of the meeting of the Department of Superintendence.

DEAN GROVER H. ALDERMAN

Brother Grover H. Alderman, Xi 141, died November 28, 1930, at Allegheny General Hospital following an operation. He was a native of Iowa, was educated in Iowa State Teachers College and Iowa State University from which institution he received his M.A. and Ph.D. degrees.

Dean Alderman was considered one of the foremost educators of Western Pennsylvania. Under his leadership the School of Education at the University of Pittsburgh was developed into one of the strongest departments in the university.

PROFESSIONAL INTERFRATERNITY CONFERENCE

Phi Delta Kappa was represented in the recent Professional Interfraternity Conference, held at Cleveland, Ohio, by Brothers Clayton R. Wise, Paul R. Young, and the Executive Secretary, Paul M. Cook. Several matters of concern to the professional fraternities were discussed at length. The most important action of the conference was a provision for the publication of a professional-fraternities handbook in which a statement of the history, aims, purposes, and ideals of each of the member fraternities will be presented. This will be a much more complete statement regarding each of the professional fraternities than is now available in Baird's Manual. The handbook will also contain a statement of the history and aims of the Professional Interfraternity Conference. The handbook will be cloth bound and will sell for $1.00. Members and chapters will have an opportunity to purchase copies when the publication is ready.

WITH ALUMNI CHAPTERS

(Directory corrected to December 1, 1930)

Watch this page for the latest available announcements of Alumni Chapter meetings. An invitation is extended by each of the chapters to members of the fraternity in the vicinity and to those who may be traveling in the vicinity to attend the scheduled meetings. If the data reported for your chapter are incorrect or incomplete, please send corrections to the editor.

ALUMNUS ALPHA—San Francisco, J. Carl Bowman, Secretary, Presidio Junior High School, Geary Street at Thirtieth Avenue, San Francisco, California. The chapter meets on the first Saturday of each month at 6:00 p. m. at the San Francisco Y. M. C. A.

ALUMNUS BETA—St. Louis, Claude E. Stephens, Secretary, 5550 Page Avenue, St. Louis, Missouri. The chapter meets on the third Saturday of each month at 6:30 p. m. at the St. Louis Y. M. C. A., 16th and Locust Streets.

ALUMNUS GAMMA—Kansas, R. A. Fritz, Secretary, Kansas State Teachers College, Pittsburg, Kansas. The chapter meets annually at the time and place of Council of Administration meeting about February 1st and also annually at the time and place of the district meeting of the State Teachers' Association, about November 1st. The chapter is working on a study which attempts to tabulate all research completed in Kansas and to tell where it is available.

ALUMNUS DELTA—Fresno, John G. Smale, Jr., Secretary, Fresno High School, Fresno, California. The chapter meets on the third Saturday of each month at 6:00 p. m. at the Y. M. C. A. Building, Fresno, California.

ALUMNUS EPSILON—Los Angeles, F. H. Reinsch, Secretary, 728 Cherry Avenue, Long Beach, California. The chapter meets on the first Saturday of each month at 6:15 p. m. at the University Club, Hope near Sixth, Los Angeles, California. The chapter publishes a monthly news letter.

ALUMNUS ZETA—Detroit, Mack P. Monroe, Secretary, 4180 Marlborough, Detroit, Michigan. The chapter mets at various places in and about Detroit about once a month and usually on Friday evening. Alumnus Zeta will be host to visiting Phi Delta Kappans at the February meeting of the Department of Superintendence. A room has been reserved at the Statler Hotel where members and committees may meet. A more complete announcement will appear in the February magazine.

ALUMNUS ETA—Santa Barbara, Samuel O. Welday, Secretary, 2117 Chapala Street, Santa Barbara, California. The chapter does not have a regular meeting place but usually meets for 6:00 o'clock dinner at place selected in Santa Barbara or Santa Maria. Get in touch with secretary for further information.

ALUMNUS THETA—Kansas City, Robert E. White, Secretary, 3525 Benton Boulevard, Kansas City, Missouri. The chapter meets on or about the 15th of each month at 6:00 o'clock at the Bellerive Hotel.

ALUMNUS IOTA—South Dakota, W. F. Sloan, Secretary, Spearfish, South Dakota. The chapter meets annually at the state association meeting.

ALUMNUS KAPPA—Warrensburg, N. B. Grinstead, Secretary, State Teachers College, Warrensburg, Missouri. The chapter meets on the first Thursday of each month in the homes of various members of the chapter.

ALUMNUS LAMBDA—Colorado, C. B. Hershey, Treasurer, Dean of Men, Colorado College, Colorado Springs, Colorado. The chapter meets twice each year, at the fall meeting of the Colorado Education Association in Denver, and at the spring School and College Conference at Boulder.

ALUMNUS MU—Muncie, W. E. Wagoner, Secretary, Ball State Teachers College, Muncie, Indiana. The chapter meets at 6:15 p. m. on the second Tuesday of each month, at Ball State Teachers College.

ALUMNUS NU—Chicago, Harry W. Wood, Secretary, 6610 Kenwood Avenue, Secretary, Chicago, Illinois. The chapter meets on the third Tuesday of each month at 6:00 p. m., at the Central Y. M. C. A., 19 South LaSalle Street, Chicago.

ALUMNUS XI—Sacramento, Harry E. Tyler, Secretary, Dean of Men, Sacramento Junior College, Sacramento, California. The chapter meets at 6:00 p. m. on the second Saturday of each month at Sacramento Hotel. Each program includes five-minute talks, music, an address, and discussion.

ALUMNUS OMICRON—Kirksville, C. H. McClure, Secretary, N. E. Missouri State Teachers College, Kirksville, Missouri.

ALUMNUS PI—San Antonio, Merrill Bishop, Secretary, Board of Education Office, San Antonio, Texas. The chapter meets on the third Wednesday of each month at the Milam Cafeteria, Travis Street, San Antonio, at 6:30 p. m.

ALUMNUS RHO—Pittsburg, Ralph A. Fritz, Secretary, Kansas State Teachers College, Pittsburg, Kansas. The chapter meets on the first Saturday of each month at 6:00 p. m. at the Hotel Stilwell.

Directory of Chapters

Corrected to December 1, 1930

ALPHA—Indiana University
Edgar A. O'Dell, Secretary, Science 36, Indiana University, Bloomington, Indiana.

BETA—Columbia University
Geo. H. Armacost, Secretary, Box No. 113, Teachers College, Columbia University, New York, N. Y.

GAMMA—University of Missouri
Ward E. Barnes, Secretary, University High School, Columbia, Missouri.

DELTA—Stanford University
James H. Pendleton, Secretary, Box No. 1165, Stanford University, California.

EPSILON—University of Iowa
Ross Beall, Secretary, College of Education, University of Iowa, Iowa City, Iowa.

ZETA—University of Chicago
Arthur E. Traxler, Secretary, Faculty Exchange, School of Education, University of Chicago, Chicago, Illinois.

ETA—University of Minnesota
Walter Anderson, Secretary, Room 210, Education Building, University of Minnesota, Minneapolis, Minnesota.

THETA—Cornell University
C. G. Bennett, Secretary, Division of Education, Sage Hall, Cornell University, Ithaca, New York.

IOTA—Harvard University
John W. Wallace, Secretary, 6 Lawrence Hall, Kirkland Street, Cambridge, Massachusetts.

KAPPA—University of Kansas
Foster Rundle, Secretary, 117 Fraser Hall, University of Kansas, Lawrence, Kansas.

LAMBDA—University of California
Lawrence T. Crawford, Secretary, Haviland Hall, University of California, Berkeley, California.

MU—University of Texas
Lee Davenport, Secretary, Box No. 1642, University Station, Austin, Texas.

NU—University of Washington
John Corbally, Secretary, 114 Education Hall, Seattle, Washington.

XI—University of Pittsburgh
Theodore A. Siedle, 201-B State Hall, University of Pittsburgh, Pittsburgh, Pennsylvania.

OMICRON—University of Nebraska
Roy E. Cochran, Secretary, Room 202, Teachers College, University of Nebraska, Lincoln, Nebraska.

PI—University of Illinois
R. T. Gregg, Secretary, 102 Education Building, University of Illinois, Urbana, Illinois.

*RHO—New York University
Ira M. Kline, Secretary, Fairview Terrace, White Plains, New York.

SIGMA—Ohio State University
T. Ernest Newland, Secretary, Education Building, Ohio State University, Columbus, Ohio.

TAU—University of Pennsylvania
Karl F. Oerlein, Secretary, Room 113, Bennett Hall, University of Pennsylvania, Philadelphia, Pa.

UPSILON—Northwestern University
Paul C. White, Secretary, School of Education, Northwestern University, Evanston, Illinois.

PHI—University of Wisconsin
Vergil E. Lyon, Secretary, Box No. 183, Bascom Hall, University of Wisconsin, Madison, Wisconsin.

CHI—University of Oregon
Earl M. Pallett, Secretary, School of Education, University of Oregon, Eugene, Oregon.

PSI—Peabody College
R. G. Bigelow, Secretary, Peabody College, Nashville, Tennessee.

OMEGA—University of Michigan
Lofton V. Burge, Secretary, 4007 University High School, University of Michigan, Ann Arbor, Mich.

ALPHA-ALPHA—University of Oklahoma
Lonnie D. Huddleston, Secretary, Box No. 271, Faculty Exchange, University of Oklahoma, Norman, Okla.

ALPHA BETA—University of Virginia
H. G. Acker, Secretary, Room D, Peabody Hall, University of Virginia, University, Virginia.

ALPHA GAMMA—State College of Washington
H. Ward Crowley, Secretary, Box No. 247, College Station, Pullman, Washington.

ALPHA DELTA—Kansas State Agricultural College
George Gemmell, Secretary, Department of Education, Kansas State Agricultural College, Manhattan, Kansas.

ALPHA EPSILON—University of Southern California
Merritt M. Thompson, Secretary, Box 123, University of Southern California, Los Angeles, California.

ALPHA ZETA—University of Arizona
Simon Kinsman, Secretary, Bin-A, University Station, College of Education, Tucson, Arizona.

*ALPHA ETA—Temple University
William W. Hazlett, Secretary, 5944 Belden Street, Philadelphia, Pennsylvania.

ALPHA THETA—University of North Dakota
J. D. Henderson, Secretary, Box 546, University Station, Grand Forks, North Dakota.

ALPHA IOTA—University of Cincinnati
John A. Broxson, Secretary, Room 14, McMicken Hall, University of Cincinnati, Cincinnati, Ohio.

ALPHA KAPPA—University of Tennessee
Alfred Gipson, Secretary, Box 4188, University of Tennessee, Knoxville, Tennessee.

ALPHA LAMBDA—Boston University
Edward H. Temple, Secretary, 29 Exeter Street, School of Education, Boston, Massachusetts.

ALPHA MU—Colorado State Teachers College
Fred E. Miller, Secretary, Colorado State Teachers College, Greeley, Colorado.

ALPHA NU—University of Kentucky
Louis Clifton, Secretary, School of Education, University of Kentucky, Lexington, Kentucky.

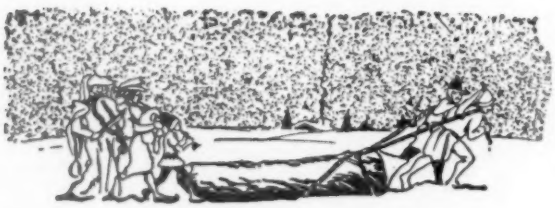
ALPHA XI—University of Alabama
A. S. Harris, Secretary, Care Dr. Paul W. Terry, School of Education, University, Alabama.

**All Chapter addresses are permanent except those marked by an asterisk*

AND suddenly there was with the angel a multitude of the heavenly host praising God, and saying, Glory to God in the highest, And on earth peace among men in whom He is well pleased

Luke 2:13-14

PEACE is not a static thing. To maintain peace is as dynamic in its requirements as is the conduct of war. We can not say, "Let there be peace," and go about other business. Nor are the methods by which peace is to be maintained and war prevented to be established by slogans or by abstract phrases or by academic theory.

Progress toward peace can be attained only as a result of realistic practical daily conduct among nations.

—Herbert Hoover